

Was the 1950 Car Better Than the 1960 Car?

see page 18

MOTOR TREND



Lifting the Lid on the Firebird II

ROAD TESTS: DE SOTO, OLDS

New Spark Plug Invention!

SELF-CLEANING, 21 POINT

Nickel-Cadmium SPARK PLUG



U.S. PAT.
NO. 3,072,666

TESTS PROVE: ★ 10 HORSEPOWER GAIN

★ 9 MPH GREATER SPEED

★ 15% FUEL SAVING

THE INSULATOR...High-voltage patented Ebanite® insulator, developed and used only by Life-Long, has a hardness in the same range as precious jewels. You can identify Life-Long Plugs by the black insulators. This costly new material has 20 times higher thermal conductivity than ordinary insulators.

THE BUSINESS END...New type solid electrodes have no points to burn off! The "business" end of Life-Long Plug utilizes unique nickel-cadmium electrodes to produce fuller, hotter spark firing from 21 or more points and spreading around the full 360° circle. Life-Long Plugs have approximately 40 times more firing surface than conventional one-electrode plugs, giving more efficient, even combustion.

THE SHELL...Made of a new alloy developed specifically for Life-Long by modern metallurgy. Unlike old style 2-piece shells, the Life-Long shell is one precision-machined piece fused to the Ebanite insulator under tremendous hydraulic pressure and induction to make a positive seal. This prevents "blow-by," major cause of failure in plugs with 2-part shells.

LIFE-LONG NICKEL-CADMIUM PLUGS ARE GUARANTEED TO:

- 1—End plug replacement costs
- 2—Step up engine horsepower
- 3—Increase your gasoline mileage
- 4—Improve acceleration
- 5—Give smoother idling
- 6—End engine knock
- 7—Never need regapping

With the introduction of sensational new type Life-Long Nickel-Cadmium Plugs, the spark plug is no longer the "most troublesome, most often-replaced" part of your automobile. In fact, you will never have to replace the plugs in your car once you install a set of Life-Long Plugs!

LIFE-LONG—WORLD'S ONLY PLUG WITH FULL-CIRCLE FIRING

Life-Long's revolutionary "ring of fire" principle is the first major improvement in plugs in 35 years. Instead of small "spot" spark arcing between the same two points, the Life-Long Plug makes a hot spark 400% to 500% greater in volume, spread around the entire circumference of the solid electrode. The piston stroke of today's high-compression engines is so powerful that it can actually "blow out" the spark produced by old type plugs. Blowing out is impossible with Life-Long's full-circle spark.

Heat is spread around the full perimeter, resulting in cooler electrode temperature. The causes of wear, burning and insulator failure are eliminated.

SELF-CLEANING. Because the Life-Long Plug fires simultaneously inside and outside the shell, fuel mixture is ignited at the same time a powerful turbo wiping action, created by the piston stroke, burns and blows out the carbon. Power loss is prevented and you get greatly increased horsepower and gasoline mileage. In a series of road tests, some cars have shown 10 horsepower gain, mileage increase 15% and more.

OIL INDUSTRY RESEARCH DISCOVERS AMAZING ELECTRODE SECRET

Research engineers of leading oil companies recently revealed that nickel-cadmium is the most perfect material yet developed for the electrodes of spark plugs designed for modern high-compression, internal combustion automobile engines. The nickel-cadmium solid electrode of the Life-Long Plug has ideal characteristics of extremely high conductivity and durability, being able to withstand temperatures of 3500° indefinitely.

BUILT-IN CADALLOY CATALYST

These same research engineers also discovered that a new alloy (which we call Cadalloy) introduced into the combustion chamber of a plug, acts as a catalyst to produce the most efficient fuel combustion. Life-Long Plugs are the first to use this important discovery!

ATTENTION, OWNERS OF 12-VOLT AUTOS. Conventional plugs, designed for 6-volt electrical systems, do not function well in modern 12-volt systems. Life-Long Plugs are designed to handle twice the voltage capacity of 6-volt systems. If your car has a 12-volt system, don't be misled—only Life-Long gives you full plug efficiency!

LIFE-LONG PLUGS ACTUALLY COST LESS! A set of Life-Long Nickel-Cadmium Plugs will outlast six or more sets of ordinary plugs. You end replacement costs completely. Yet the set of 6 Life-Long Plugs costs only \$8.95 each. Set of 8 only \$11.95.

ORDER REGISTERED SET FOR YOUR CAR NOW. Life-Long Nickel-Cadmium Spark Plugs come to you in a tamper-proof, laminated plastic container. Sealed at the factory, your Life-Long Plugs are not touched until you break the seal.

PLEASE NOTE: The Life-Long spark plug is different in every way—not just an "improved" plug, but an entirely new engineering development!



Bonded Guarantee

"I certify that the set of self-cleaning, 21 pt. Life-Long Nickel-Cadmium Spark Plugs you will receive are identical to those used in my own car for over 100,000 miles. I guarantee that Life-Long Plugs will give you an immediate horsepower and mileage gain and will continue to fire clean, hot and steady without cleaning or regapping."

J. M. Watz
J. M. WATZ, President
LIFE-LONG SPARK PLUG CORP.

Only spark plug guarantee backed by a cash bond held by an independent financial institution (details on request).

LIFE-LONG SPARK PLUG CORP., Dept. MT-44
140 Kansas Street, El Segundo, California

Please mail postpaid, registered sets of Life-Long Nickel-Cadmium Spark Plugs guaranteed to increase my car's mileage, speed and horsepower. (Set of 6, \$8.95; set of 8, \$11.95.)

Name _____

Street _____

City _____ Zone _____ State _____

Year of Car _____ Model of Car _____

Make of Car _____ No. of Cylinders _____

I enclose ☐ check ☐ cash ☐ money order

LIFE-LONG

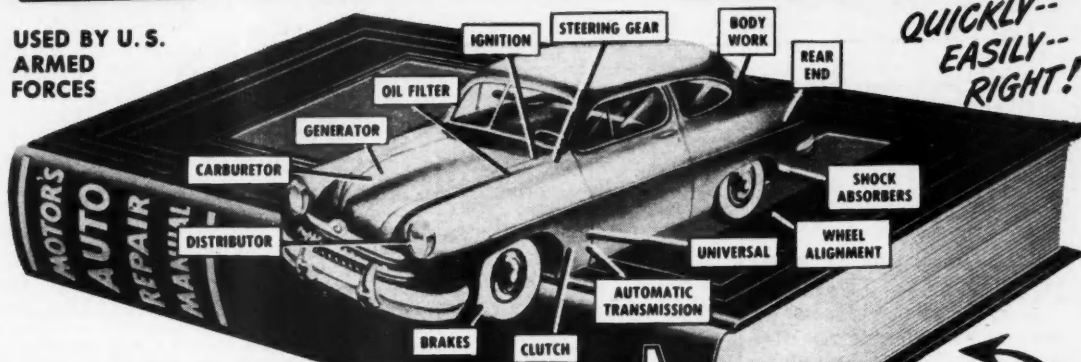
SPARK PLUG CORPORATION
140 Kansas Street, El Segundo, California

OPPORTUNITY FOR DISTRIBUTORS
Many choice territories are still available. All territories are awarded on an exclusive basis, protected by a written franchise. No charge for franchise. Write, wire or phone today. Cable: Sparcorp, Los Angeles.

HOW TO FIX

Brakes, Clutches, Transmissions, Rear Ends, Carburetors—Yes, ANY PART OF ANY CAR

USED BY U. S.
ARMED
FORCES



QUICKLY--
EASILY--
RIGHT!

NOW—Whether You're a Beginner or an Expert Mechanic—You Can "Breeze Through" ANY AUTO REPAIR JOB! MOTOR'S BIG BRAND-NEW AUTO REPAIR MANUAL Shows You HOW—With 2900 PICTURES AND SIMPLE STEP-BY-STEP INSTRUCTIONS.

Free 7-DAY TRIAL
Return and Pay Nothing
If Not Satisfied!

COVERS EVERY JOB ON EVERY CAR BUILT FROM 1940 THRU 1955

YES, it's easy as A-B-C to do any "fix-it" job on any car whether it's a simple carburetor adjustment or a complete overhaul. Just look up the job in the index of MOTOR'S New AUTO REPAIR MANUAL. Turn to pages covering job. Follow the clear, illustrated step-by-step instructions. Presto—the job is done!

No guesswork! MOTOR'S Manual takes nothing for granted. Tells you where to start. What tools to use. Then it leads you easily and quickly through the entire operation!

Over 2,900 Pictures! So Complete, So Simple, You CAN'T Go Wrong!
BRAND-NEW REVISED Edition covers everything you need to know to repair over 737 chassis models. Over ONE THOUSAND giant pages, 2,900 "This-Is-How" pictures. Over 291 "Quick-Check" charts—more than 23,436 essential repair specifications. Over 225,000 service and repair facts. Instructions and pictures are so clear you can't go wrong!

Even a green beginner mechanic can do a good job with this giant manual before him. And if you're a top-notch

mechanic, you'll find short-cuts that will amaze you. No wonder this guide is used by the U. S. Army and Navy! No wonder hundreds of thousands of men call it the "Auto Repair Man's Bible!"

Meat of Over 160 Official Shop Manuals

Engineers from every automobile plant in America worked out these time-saving procedures for their own motor car line. Now the editors of MOTOR have gathered together this wealth of "Know-How" from over 160 Official Shop Manuals, "boiled it down" into

crystal-clear terms in one handy indexed book!

Try Book FREE 7 Days

SEND NO MONEY! Just mail coupon! When the postman brings book, pay him nothing. First, make it show you what it's got! Unless you agree this is the greatest time-saver and work-saver you've ever seen—return book in 7 days and pay nothing. Mail coupon today! Address: **MOTOR Book Dept., Desk 50D, 250 West 55th St., N. Y. 19, N. Y.**

Covers 737 Models—All These Makes

Buick	Ford	Nash
Cadillac	Frazer	Oldsmobile
Chevrolet	Henry J	Packard
Chrysler	Hudson	Plymouth
Crosley	Kaiser	Pontiac
De Soto	Lincoln	Studebaker
Dodge	Mercury	Willis

Many Letters of Praise from Users
"MOTOR'S Manual paid for itself on the first 2 jobs, and saved me valuable time by eliminating guesswork."
—W. SCHROF, Ohio.

He Does Job in 30 Min.—Fixed motor another mechanic had worked on half a day. With your Manual I did it in 30 minutes.
—C. AUBERRY, Tenn.

MAIL COUPON NOW FOR 7-DAY FREE TRIAL

MOTOR BOOK DEPT.
Desk 50D, 250 W. 55th St., New York 19, N.Y.

Rush to me at once (check box opposite book you want):

☐ **MOTOR'S New AUTO REPAIR MANUAL.** If O.K., I will remit \$2 in 7 days, \$2 monthly for 2 months and a final payment of 95c (plus 35c delivery charges) one month after that. Otherwise I will return the book postpaid in 7 days. (Foreign price, remit \$9 cash with order.)

☐ **MOTOR'S New TRUCK REPAIR MANUAL.** If O.K., I will remit \$2 in 7 days, and \$2 monthly for 2 months, plus 35c delivery charges with final payment. Otherwise I will return book postpaid in 7 days. (Foreign price, remit \$10 cash with order.)

Print Name.....Age.....

Address.....

City.....State.....

☐ Check box and save 35c shipping charge by enclosing WITH coupon entire payment of \$6.95 for Auto Repair Manual (or \$8 for Truck Repair Manual). Same 7-day return-refund privilege applies.

(ADVERTISEMENT)

McCulloch Supercharger



>> Tips

by
John Thompson

Keeping it in the family! Bob McCulloch, Jr., down from Stanford University on vacation, took his McCulloch (what else!) supercharged "T-bird" to the Los Angeles Drag Strip and set a new track record for modified sports cars. Bob turned in a scorching 102.93 mph in the quarter to beat the old record by .7 sec. His car is a single carburetor job with Fordomatic.

Then there's this report from our Mexico distributor, Automotries O'Farell. His McCulloch supercharged Packard takes a "test hill" at 85 mph. The best it could do on the same hill before supercharging was 43 mph!

That hill climbing test on the Packard reminds me of all the McCulloch superchargers we sell to people who aren't interested in "dragging" or top speed. They buy the blower for a station wagon they use for hunting and fishing trips or for the car they use to haul their house trailer. They're looking for greater hill climbing ability and better high-altitude performance and the McCulloch gives it to them.

We've two new supercharger kits. They are for air conditioned (Factory type) '56 Lincoln and Buick. Air conditioning continues to give us a bad time on some cars because the compressors take up so much underhood room. But, with a little extra work, we're able to fit almost all air conditioned cars. So, if you write me, be sure and mention if your car has air conditioning.

It's two McCulloch superchargers for the Hearsts! David Hearst, publisher of the Los Angeles Herald & Express, just put one on his '55 Chrysler 300. Brother William R. Hearst, Jr., has a McCulloch on his Buick.

The mail problem! Wow! I never realized how much mail this column would bring in! Frankly, I'm really pleased, but it is tough to keep up with all of it. So, if you don't get a real quick answer to your letter, please bear with me. Just as soon as I can, I'll get to your question.

By now, you've guessed that we sell the McCulloch supercharger. Put one on your car and it will increase your rear-wheel horsepower 40 per cent or more! We have complete McCulloch supercharger kits for most all recent V-8 powered cars, pick-ups, and light trucks. We also supply just the supercharger for custom installation on almost any automotive engine. And, since the McCulloch supercharger gives you this added horsepower, at less cost per "horse" than other methods and without any loss of smoothness or reliability, it's no wonder they're selling like hotcakes. So, if you're interested, write me. Tell me the make and year of your car, the type carburetor, and if you have power kit or other power accessories. I'll send you complete details, prices and a new illustrated folder. Write to John Thompson, Paxton Products Division, McCulloch Motors Corporation, 827 W. Olive St., Inglewood, Calif.

EDITOR.....Walter A. Woron
Managing Editor.....Pete Molson
Executive Ed.....Don MacDonald
Detroit Editor.....Jim Lodge
Sports Editor.....Al Kidd
Classic Car Editor.....Bob Gottlieb
Staff Writer.....Paul Sorber

ART STAFF
Director.....Al Isaacs
Asst. Director.....Don Fell
Production.....Yvonne Hull
Photo.....Bob D'Olivio,
Al Palocz, Colin Creitz

PUBLISHER.....R. E. Petersen
General Manager.....Lee Ryan
Business Manager.....Ted Johnson
Circulation Mgr.....Gordon Behn

ADVERTISING

Coordinator.....Jack Preston
Manager.....Jim Going
Production.....Dick Jones

ADVISORY STAFF

Engineering Editor.....John Booth
Technical Advisor Doug Moreton

PUBLISHED MONTHLY VOL 8 NO. 4

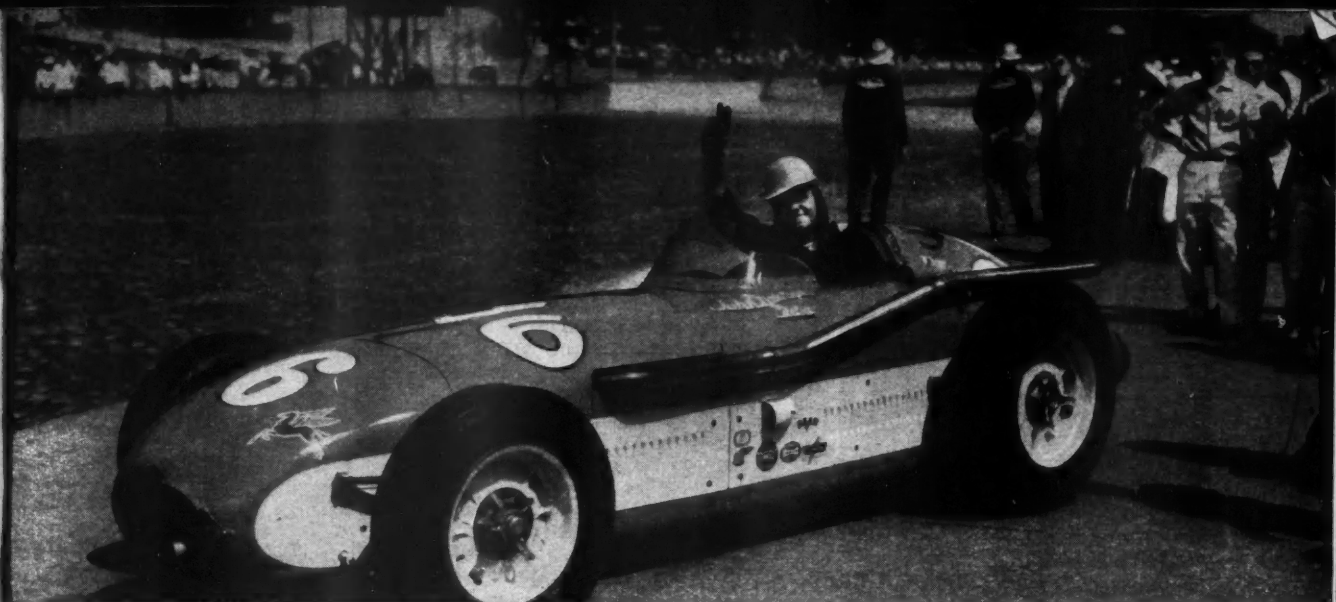


road tests	'56 OLDSMOBILE 88.....Al Kidd	22
	'56 DE SOTO.....Jim Lodge	34
the new cars	SPOTLIGHT ON DETROIT.....Jim Lodge	10
general	I HAD A DREAM.....John Booth	18
	<i>Set back 5 years by the last war, Detroit's engineers and designers are bringing about a steady evolving of the American automobile</i>	
	TWO FOR THE ROAD.....Jonathan Claver	40
	<i>A modern Darwin's predictions on the evolution of the Homo Sapiens into 2 distinct species</i>	
	TAKE THE SURPRISE ELEMENT OUT OF DRIVING.....Sherman Martin	44
	DRIVING AROUND WITH WALT WORON.....	54
	<i>Our "maiden" ride in the newest sensation of the automotive world—the Citroen DS-19—and a supercharged Plymouth</i>	
cars to come	X-RAYING THE FIREBIRD II.....Don MacDonald	28
classic cars	DUESENBERG.....	42
	CLASSIC COMMENTS.....Robert J. Gottlieb	43
custom cars	THE BEAUTY LINGERS ON.....	50
foreign cars	NIMBLE ROADENT.....	8
	DRIVESCRIPTION: '56 BENTLEY.....Don MacDonald	26
	A CAR IS A MANY SPLENDORED THING.....	52
	THE CONSERVATIVE BRITONS.....	60
	MEMO—PLEASE IMPORT THIS ONE.....	73
sports	MOTOR SPORTS.....Al Kidd	38
technical	THE GREAT GEARBOX SWINDLE Paul Sorber	32
	THIS DIESEL WHISPERS.....	62
	TECHNICAL QUESTIONS.....	63
departments	EDITORIAL.....6	CAR OWNERS LIBRARY.....14
	GLOVE COMPARTMENT.....7	DUNCAN HINES SUGGESTS.....58
	FROM THE REAR SEAT.....8	MOTORING ACCESSORIES.....68
	LETTERS.....12	SELL 'N' SWAP ADS.....71

the cover

In this issue MT makes a thoro study—both external and internal—of GM's experimental Motorama creation, the Firebird II. The X-ray view on the cover is a rendering by Charles Davison of Detroit.

MOTOR TREND, U. S. Copyright 1956 by Trend Inc., 5959 Hollywood Blvd., Los Angeles 28, California. Phone Hollywood 2-3261. Entered as Second Class Matter at the post office at Los Angeles, California.
SUBSCRIPTION RATE: \$3.00 per year. Two years—\$5.00. Single copy 25c. On sale at newsstands throughout the country.
CHANGE OF ADDRESS: Three weeks' notice is required. When requesting a change, please name magazine and either furnish an address imprint from a recent issue, or state exactly how label is addressed. Change cannot be made without the old as well as the new address.
ADVERTISING: Advertising Sales Mgr.—Jim Going, 5959 Hollywood Blvd., Los Angeles 28, California. Midwest Advertising—Joseph Jaglala, 1515 Book Bldg., Detroit 26, Michigan. Phone Woodward 3-8660. Eastern Advertising—Ben LaRester, 650 Fifth Ave., New York 36, N. Y. Phone Circle 6-1368. Close 35th of 3rd month preceding publication date. (See SRS.)
CONTRIBUTORS: Should be mailed to 5959 Hollywood Blvd., Los Angeles 28, Calif. They must be accompanied by return postage and we assume no responsibility for loss or damage thereto. Any material accepted is subject to such revision as is necessary in our sole discretion to meet the requirements of this publication. Upon acceptance, payment will be made at our current rate, which covers all author's and/or contributor's right, title, and interest in and to the material mailed including but not limited to photos, drawings, charts and designs, which shall be considered as text. The act of mailing a manuscript and/or material shall constitute an express warranty by the contributor that the material is original and in no way an infringement upon the rights of others.
Printed in U.S.A. by Pacific Press Inc., Los Angeles, California.



AAA Champion Bob Sweikert—won at Indianapolis and placed in six other "big car" races

Biggest winners in AAA and NASCAR races prove Champions best for your car!

**Bob Sweikert and Tim Flock used 5-rib
Champion Spark Plugs in every one of 43 races!**

Here's solid proof of what Champion Spark Plugs can do for *your* car:

Not only in racing cars, but in NASCAR races with all makes of standard cars—just like those you drive—98% of the winners were powered by *Champions*.

Bob Sweikert, 1955's AAA champion—who finished first in the Indianapolis "500"—powered his racing car with Champions.

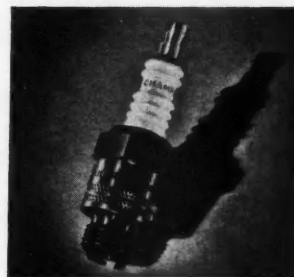
Tim Flock, the year's top NASCAR winner, drove his Chrysler "300" with Champions. In fact, virtually every racing

driver in America insists on Champion Spark Plugs—*regardless of his make of car.*

These men really know cars. What stronger evidence could there be that Champions are best for your car, too!

No matter what car you drive, new Champion Spark Plugs will give quicker starts, fuller power, better gas mileage.

Remember—even the best spark plugs become inefficient after about 10,000 miles. So have yours checked today. If you need new plugs, get the best—5-rib Champions.



CHAMPION

LOOK FOR THE FIVE RIBS

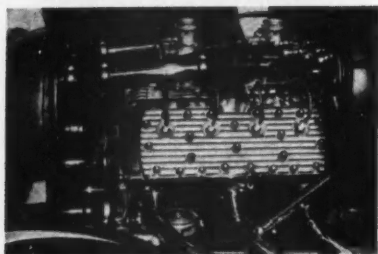
NASCAR Champion Tim Flock—Champions powered his Chrysler "300" to 18 wins, 15 placings





IF YOU "EAT, SLEEP
AND LIVE" CARS...

TURN YOUR HOBBY INTO A CAREER!



Get America's Big-time, Big-future AUTO MECHANICS & DIESEL COURSE

at home in your spare time!

Los Angeles' National Schools, America's automotive Technical Trade School since 1905, now brings its famous resident Shops and Faculty direct to you at home — to prepare you to earn more money, with job security, in today's fast-moving, opportunity-filled Auto Mechanics Industry!

Get your home training from the "Car Capital of The World"—America's most auto-minded city, center of Hot Rod and Sports Car activity! Mail coupon right now!



HERE'S THE GOOD WORD ON OUR "SHOP-METHOD" HOME TRAINING!

YOU MASTER ALL PHASES, INCLUDING DIESEL! Every step fully explained. You pace yourself. All lessons fully illustrated. Latest equipment covered. Send for free Sample Lesson!



THIS SET OF LIFETIME TOOLS—YOURS FREE plus all-metal tool box, mechanical drawing set and other equipment. All part of your course, yours to keep.

EARN WHILE YOU LEARN! You can start Spare Time Earnings soon after enrollment. Many students pay for their training and more this way. **OUR GRADUATE DEPARTMENT** always at your service, both as student and graduate, helps you with personal and technical problems.

ATTENTION MEN OF DRAFT AGE. Many students have achieved higher rating, prestige, and higher pay as a result of this training. Mail coupon at once.

APPROVED FOR G. I. TRAINING
Both Home Study & Resident Courses Offered



Send for **FREE FACT-BOOK
AND SAMPLE LESSON!**

NOW! 2 offices to serve you faster!
Mail coupon today to one nearest you!

NATIONAL SCHOOLS

Technical Trade Training Since 1905

LOS ANGELES 37, California

CHICAGO: 187 N. La Salle St.

IN CANADA: 811 West Hastings Street, Vancouver, B. C.

MAIL NOW TO OFFICE NEAREST YOU!

(mail in envelope or paste on postal card)

NATIONAL SCHOOLS Dept. DW-46

4000 S. FIGUEROA STREET OR 187 N. LA SALLE ST.

LOS ANGELES 37, CALIF. OR CHICAGO 1, ILL.

Send **FREE** Auto-Mechanics Book and Sample Lesson. No obligation, no salesman will call.

NAME _____ BIRTHDAY _____ 19____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

☐ Check if interested ONLY in Resident Training at Los Angeles. VETERANS: Give date of discharge.

EDITORIAL

A Governor In Your Future?

ONCE IN A WHILE it seems that all of us have our flights into fantasyland, whether it be by levitation, by jumping onto the deck of a UFO, or walking thru a mirror. The manner in which new developments have been appearing in the automotive world almost compels us to teleport ourselves to the future. What will it bring?

Certainly, there is considerable room for conjecture, what with pronouncements being made of fuel injection [Feb. '56 MT], cars (in principle) being able to operate on hydraulic turbines [the Ferguson principle, Feb. MT], a passenger-type car with a gas turbine powerplant for the near future [this issue], a lightweight engine with double-ended pistons operating like a watch escapement [March MT]; more complete details in May], air-oil suspension on passenger cars [March MT], and radar-controlled brakes.

Surely, with all these developments having appeared in the past few months, it is not too difficult to conceive of fantastic ideas coming into the realm of practicality within the next few years. Is it too difficult to imagine cars that, when entering the orbit of a crowded city, *will be guided thru the downtown area by electronic controls?* Or, a pushbutton in the home *that will start and idle the engine* of the garaged car so that it will be warmed up? Or, speeding drivers whose cars will be *slowed down?*

One change which we will venture to predict will *not* occur in our cars of the future (if we can keep our heads about us and about those of our representatives in Washington) is the adoption of governors to control speed. As you are no doubt aware, there is a movement afoot in the legislative branch of our government to "pass a law to make it impossible for anyone to drive an automobile faster than 70 mph." Altho it is extremely doubtful if Congress can constitutionally regulate automobile speeds, it may just be possible under its power to regulate interstate commerce.

What's behind this desire to control speed? By a sort of reverse twist, it's probably the manufacturers of today's cars. Almost all of them presently brag about the speed and accelerative qualities of their cars. And in the hands of uninformed drivers these cars *can* be dangerous. They—and all of us—must see to it that no one drives a car faster than *he is capable of going safely.*

To our way of thinking, speed control governors are not the answer. Back in the 30s they were tried on trucks in some states, but gradually fell into disuse. A few years ago a New Jersey judge came up with the idea of installing governors on the cars of drivers convicted of speeding. The reason these attempts failed is an inherent fault of governors: whether the engine speed or car speed is restricted, performance below the control speed is also restricted.

The most significant change in performance by the use of a speed governor occurs in passing ability, or minimum passing distance. The optimum passing distance is obtained by a combination of the right horsepower and speed differential between the cars concerned for a given condition. Oddly enough, the reduction in passing distance as a result of increasing horsepower soon becomes a matter of diminishing return; doubling the horsepower from 80 to 160 decreases passing distance by 20 per cent, while another 100 per cent increase in power brings a further reduction of only 4 per cent. Tests made at the General Motors Proving Ground have shown that at given speeds below the governed speed, there is a throttling effect similar to a 100-foot increase in passing distance. If you assume that a car accelerates from 40 to 55 mph during a given passing maneuver, it is obvious that if it is governed at 50 mph both the time and distance will be extended.

Governing the car or its engine is *not* the answer; the best governor of speed that has been devised is still the throttle foot of the *educated driver.*

—Walter A. Woron

GLOVE compartment

PLYMOUTH WITH BRITISH DIESEL

THE BRUSSELS MOTOR SHOW revealed that Chrysler is offering a Perkins 4-cylinder diesel engine in the Plymouth Belvedere as an alternative to the conventional gasoline unit.

THAT'S OUR BOY

McKINLEY W. THOMPSON, JR., of Asbury Park, N.J., is a member of the recent graduating class from Art Center School in Los Angeles, where he received his degree in



Industrial Design. Mr. Thompson attended Art Center as the winner of a 4-year scholarship granted by the Ford Motor Co. thru a sports car design contest conducted by MOTOR TREND. He will soon join the Styling Division of Ford in Detroit.

DODGE SURRENDERS TO TEXAS

Detroit, Dec. 29. From Dodge News Bureau to car-buying Texans: Announcement of "Texan" hardtops and sedans built exclusively for sale in Texas, carrying crossed Texas flags on front fenders, chromed map of Texas on rear fenders.

Waco, Jan. 4. From Daughters of the Republic of Texas to Wm. C. Newberg, President of Dodge Division: Telegrammed request for "... immediate removal of Texas flags from your beautiful new Dodge ..."

(Move spearheaded by law forbidding use of Texas flag for advertising purposes.)

Detroit, Jan. 5. From Dodge president to DRT president, Mrs. Megarity: "... emblem was selected innocently for use as a salute to your great state."

Dallas, Jan. 6. From Associated Press news story, Texans learned of "Texan," swamped Dodge dealers. Chosen few got collectors items, late arrivals found crossed flags had been hand-cut in Bill Newberg's strategic withdrawal, lacked lone stars, white portions of flag.

ANYTHING YOU CAN DO . . .

JUNIOR ACHIEVEMENT COMPANIES are teen-age groups which duplicate big business on a small scale for education and profit.

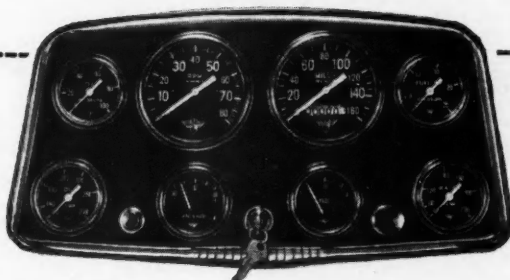
A go-getting group of 24 teen-age boys and girls in Wyandotte, Mich., have undertaken the largest Achievement project to date—the assembly and sale of a '56 Dodge. The group has set up its corporation, sold stock, rented factory space, purchased insurance, set a wage scale of 10¢ an hour and 15¢ for overtime and arranged to buy all the necessary parts from Chrysler's Dodge Division.

The car will have a gold-painted engine with chrome accessories, special crests for grille and hubcaps and the word "Achiever" as the front fender model designation. With a 2-hour work week the Achiever is scheduled for delivery in April. Club members anticipate no difficulty in selling the car, and plan on making a good profit.

Dress up your Dash



with a complete, accurate picture
of engine performance . . .



STEWART-WARNER Instruments

There are Stewart-Warner instruments that tell you everything you want to know about your car's performance! They're the world's most dependable automotive instruments, backed by a half-century of instrument manufacturing experience. The complete Stewart-Warner line includes 160 MPH speedometers, 8,000 RPM tachometers, and heavy-duty gauges for every operating need. Each can be mounted individually. Or you

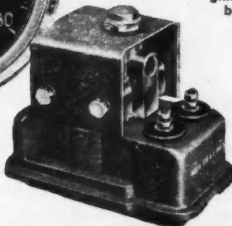
can select any combination of instruments, and install them in a Stewart-Warner stock panel of your choice, to have a custom-styled panel.

The "Hollywood," illustrated above, holds speedometer and tachometer, plus choice of any six heavy-duty gauges. Also has holes for starter button, light switch, ignition switch. Over-all length 15", height 7 7/8". Engine turned, Black-wrinkle, Mahogany, or Black-lined chrome finish.



NEW CATALOG!

Go to your speed shop for the Stewart-Warner catalog of instruments for Custom Cars.



ELECTRIC TACHOMETER

Heavy-duty construction for positive performance, accuracy and long life under all conditions. Pointer reading is steady, with minimum of over-run even with abrupt acceleration or deceleration. Odometer registers up to one billion engine revolutions. Power range indicators, built-in light.

ELECTRIC FUEL PUMP

Positive, dependable fuel delivery at all speeds—for quicker starts in any weather, smoother performance, no vapor lock. Operates only when needed; completely automatic. Pumps available for 6 and 12-volt systems.

STEWART-WARNER

MANUFACTURERS OF SPEEDOMETERS, TACHOMETERS AND GAUGES FOR EVERY ENGINE NEED
INSTRUMENT DIVISION, DEPT. W-46
1840 Diversey Parkway, Chicago 14, Illinois

J. C.

FREE! *New* 180 PAGE CATALOG!



Saves ^{UP TO} **50%**

**OVER 75,000
AUTOMOTIVE ITEMS
IN STOCK**

Parts and Accessories for
all makes, years and models
from 1920 through 1956!

EVERYTHING AUTOMOTIVE FROM ONE SOURCE!

Get the new 1956 edition of the world's largest and most complete auto equipment buying guide catalog—180 pages! It saves you UP TO ONE-HALF on ALL your automotive needs. Includes thousands of brand new last minute releases of accessories and parts for your car, truck, hot rod, custom car or station wagon for models from 1920 through 1956! This new catalog features the latest Hollywood and Custom equipment not yet in stores... new High Speed Parts... as well as hard-to-find exact replacement parts for old and current models alike!

Buy Direct By Mail From Whitney—and SAVE MONEY

Our tremendous buying power and huge volume enable us to cut prices to rock bottom. You actually save up to 50% and more! We stock over 75,000 items, ready for immediate shipment—with new, improved facilities to speed up service on every order. This is our twentieth year. Your satisfaction guaranteed on every order or your money back! Rush coupon for your FREE copy of our new 1956 catalog. Please enclose 25¢ in coin to help pay part of the handling and mailing costs (refunded on first \$5 order). Send for yours now!

Just Mail this Coupon, NOW!

J. C. WHITNEY & CO.
1917 O-4 Archer Avenue, Chicago 16, Ill.

Please rush your giant 180-page 1956 Catalog describing world's most complete line of auto parts and accessories—over 75,000 items at lowest prices. (Please enclose 25¢ to cover part of cost, which will be credited to you on first \$5.00 order.)

Name

Address

City Zone State



J. C. Whitney & Co., 1917 O-4 Archer Ave., Chicago 16, Ill.

SPOTLIGHT ON DETROIT

by Jim Lodge

MAYBE IT ISN'T RIGHT, but it seems that sometime, somewhere, everybody has an inner desire to see something go wrong—like waiting to see if a professional figure skater will ever slip and fall, or watching for a car to go broadside in a 30-field jalopy race.

IT HAPPENED TO US while we watched new cars being assembled on a Plymouth assembly line. But we waited in vain. Why didn't we see a blue car with green wheels? Or taxicab upholstery in a Belvedere hardtop? Or a 6-cylinder engine in a car ordered with a power-pack V8? When we asked these questions, we came up with answers that made us take a closer look at that car at the end of the line and wonder how it ever got there!

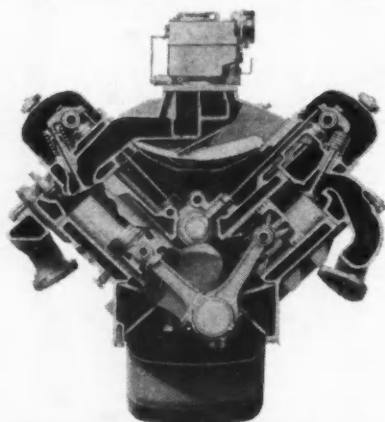
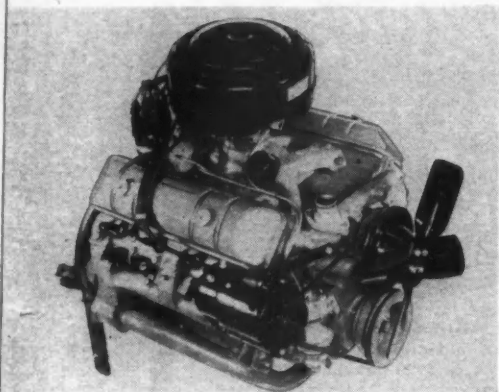
YOU'RE THE CUSTOMER, sitting at a desk in the showroom, specifying in this case a 2-door Belvedere hardtop, 2-tone black and white finish, black-and-white interior, with PowerFlite, power brakes, power steering, powerpack V8, radio, heater, standard horn ring, tinted glass. Unless a dealer has a car in stock exactly as you want it, it has to be built to your order. But you'd never recognize the dealer's order as yours, for it's completely coded. (Color, for example, might be written 661; 601 being black, and 6 indicating the trim color. Power steering would appear as 351, PowerFlite as 353.)

YOUR ORDER ARRIVES AT PLYMOUTH'S PLANT, is scrutinized in the distribution department for book-keeping purposes and for any obvious errors or deletions in the order. Then it goes to the tabulating department, and the heart of Plymouth's order-filling, car-building setup—the IBM 650 Magnetic Drum Data Processing Machine. It carries its intelligence on a memory drum revolving at 12,500 rpm, and magnetic "spots" on the drum are translated into 20,000 digits that handle the codes on your order card like they were 4th grade arithmetic problems. Each minute the machine is capable of 78,000 additions and subtractions, 5000 multiplications, 3700 divisions, and in another 60 seconds, it can make 138,000 logical decisions from the information fed to it.

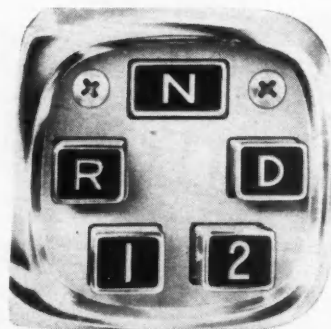
IF THIS IS AUTOMATION, then let's face it—who could do the job better? Suppose you decided you wanted to know something about the material being handled within the 650. All you do is let the machine know what you want, and it'll start a search to find out where the information is, find it, and make it available to you. The whole search process takes 0.72 milliseconds.

ITS REAL VALUE lies in being able to compute complex problems. For instance: The IBM 650, told what goes into a single car, multiplies this by the type and number of cars scheduled, and comes up with the total number of separate parts needed to produce hundreds of cars; this information dictates orders to suppliers. The process doesn't take much time either, especially when you consider the machine's output speed—100 coded cards, or 8000 digits, per minute. Now let's see what happens to your order.

FROM THE CODED ORIGINAL, a single IBM card is punched, listing not only the order number and everything about your car, but the dealer's code number, his region, your selected method of financing, the way your car is to be shipped to your area, and up to 73 other facts. What if there had been an error in coding, and your order specified a tan convertible top for your black-and-white hardtop? The statistical sorting machine would reject the card, as it would if you'd ordered a certain up-



American Motors has announced a new V8 of 250-cubic-inch displacement with a 3.50-inch bore and 3.25-inch stroke (an oversquare engine). Engineered for fuel economy, ease of servicing, light weight and strength, the engine provides for considerable increase in horsepower. Valves, heads, cooling, bearing area, and the crankshaft are sufficiently flexible in design to allow much improvement as the demand arises, tho it is producing 190 hp at 4900 rpm (torque: 240 pounds-feet at 2500 rpm) in its present "detuned" state. Electrical system is 12-volt, a single 2-throat carburetor mixes the fuel and air, valves are overhead and pushrod-operated with hydraulic tappets, and there are 5 main and 5 camshaft bearings. Altogether, the engine is only about 22½ inches wide, 28 long

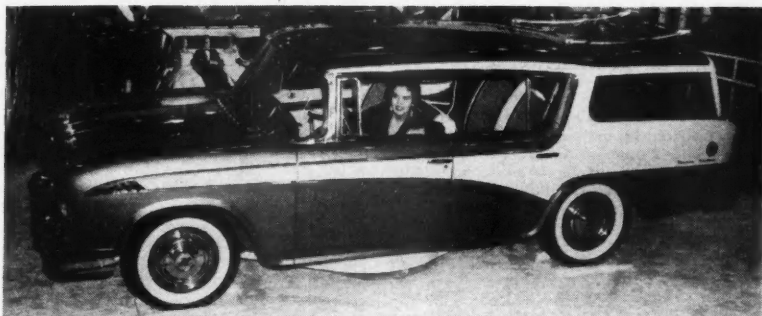


A new 3-speed automatic transmission will soon be available on the big Imperials and, within a few months, on other Chrysler automobiles. Operated by 5 pushbuttons at the left of the driver, there are 3 forward ranges (1 Low and 2 Drive) plus the usual Neutral and Reverse. The 1st range is used in all accelerations from a stop, and a device automatically shifts from 2nd to 3rd range even if the Low button is held in, thereby preventing over-revving of the engine. Flooring the accelerator or pushing the Low button will cause a downshift to 2nd range below 70 mph; and to 1st range below 25 mph. Pressing the Reverse button over 12 mph will cause a shift to Neutral

holstery that isn't available in your choice of body style. That data card looks like it had been done in by a 12-gauge Browning—but every punched hole means something. How many hours does it take to check your card and the 3500 others going thru the same production run? At one time, it took 2 to 3 hours. Now, the day's orders are checked in 10 or 15 minutes—electronically. W. J. (Bill) Bird, Plym-

noted, automatically, body type and color, other pertinent information for the body builders. Thus, when the assembly day is fixed (order-to-production time has been cut to 5 days from 14 days), the date your car is to be built is punched and the word goes out to all concerned.

THE BODY PLANT IS TOLD that they'll need (among hundreds of other orders) so many taxis with special seats



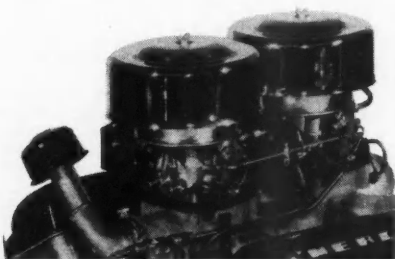
We hope this 4-door hardtop Rambler wagon is not only a new body choice but the forerunner of yet another, the convertible (or partially so) wagon. A sliding steel or canvas portion (European type) would do it

outh's vice president in charge of sales, and the man largely responsible for this setup, can remember when his staff had to look thru and reject stacks of punched cards by hand!

THE "BRAIN," while sorting, rejecting, entering, "remembering," noting billing processes to dealers, etc., has also

and provision for roof lights, and any other special-order jobs like the new Fury that is being built in Plymouth's Evansville plant, and all the body data that applies to your particular order.

THE ENGINE PLANT is told exactly what's to be in the Plymouth main assembly line (Continued on page 46)



Latest entries in the hot engine race are the pair pictured here. Photo at left shows new 260-horsepower Mercury "M-260." As we go to press Mercury says only that it has 2 4-barrel carburetors, high-lift camshaft and 9.75 to 1 compression ratio. Below is the dual 4-barrel heart of the new Pontiac engine that is rated at a startling 285 horsepower. This 317-cubic-inch engine (available on all models) has 10.0 to 1 compression ratio, special camshaft, valve lifters (hydraulic) and springs, coil, and distributor. It

can be used with either Hydra-Matic or synchromesh transmissions, a factor which—together with the wheeling and dealing of many Pontiac dealers—has begun to open the eyes of many an aspiring household hot rodder. Availability on the plainest 860 2-door, together with the fact that similar models are often loudly advertised legitimate price leaders, has begun to pay off: unadorned but very hot '56 Pontiacs now grace driveways and drag strips that would lately have refused to consider them



"A small economy car may be introduced to the American market by 1 of the Big 3."

NOT LIKELY—Anticipated gasoline tax increase could justify new interest in economy car production, but more probable basis for rumor stems from vague possibility of GM's Vauxhall and Holden, or Ford's British cars being engineered in U.S. for new-model changeover.

"Pushbutton driving will come into its own with greater use in '57 cars."

TRUE—In addition to probable use on other make transmissions, 2-button turn signals are planned, with possibility of a 3rd button flashing tail lights for off-the-road emergency stops being a good bet. **"Chevrolet will have a new transmission for '57."**

COULD BE—Introduced as a Dynaflo-like transmission, Powerglide has not availed itself of Buick's refinements. Change should not be drastic, will remain conventional torque converter. New-type Hydra-Matic is not considered a possibility. **"Recent tire developments may discourage proposed use of 14-inch wheels in '57-'58 models."**

POSSIBLE—Specialized tire design may cause formation of 2 factions—with the majority probably going to 14-inch wheels. At least one big-car line is expected to stick to 15-inch wheels with much wider tire and rim for cushiony ride; another may follow suit.

"State laws will be revised by fall announcement time to permit use of 4 headlights on new cars only."

REMOTE POSSIBILITY—No state has committed itself to time-consuming revision of old-time statutes. Packard might be the other company which recognizes grille-and-fender design possibilities with dual 5-inch lights, may be the party (with Cadillac) who is making discreet inquiries on the subject.

"Electric blowers may be used to alleviate brake-cooling problems."

FALSE—Altho proved successful in stock car racing, method would prove costly in production. Talked-about solution hints at Porsche-like finned hubcaps, directing air to brake-cooling scoops.

"Jet-age tail fins will disappear in '57." **FALSE**—On the contrary, look for some to blossom to unheard-of proportions.



A \$1.95 Investment NOW
May Save You \$100
in Engine Repairs



Install a NEUTRA-PLUG and save that hundred dollar repair bill! Ordinarily, even if you change oil regularly and drive sensibly, your engine's still going to need a costly overhaul in 20 to 40 thousand miles. Engine-formed sulphuric acid and knife-edged steel slivers will have worn it out! Stop this Engine Suicide with a NEUTRA-PLUG... which eliminates these two major causes of wear before they happen. Proven by thousands of motorists and fleet owners. ORDER ONE NOW and prove it to yourself.

MANY ADVANTAGES TO YOU!

1. NEUTRALIZES ACIDS. Corrosive gases "Blow By" Pistons and combine with moisture to form deadly acids that eat away at Vital parts of your engine. NEUTRA-PLUG's superior Active-Magnesium element completely eliminates this number one cause of engine wear.
2. TRAPS METALLIC PARTICLES. You've felt the grit on your dip-stick. It's made up of tiny metal chips and slivers that grind away at precision-machined engine surfaces. NEUTRA-PLUG'S Powerful G.E. Alnico magnet traps and holds these engine-wrecking metal particles.
3. INCREASES ENGINE POWER, PICK-UP.
4. SMOOTHER RUNNING ENGINE.
5. IMPROVES EFFICIENCY & GAS MILEAGE.
6. MAKES OIL LAST LONGER.
7. CUTS REPAIR BILLS.
8. INSTALL IN 30 SECONDS.

© 1956, Engine Accessories Mfg. Co.

Why NEUTRA-PLUG is your best buy!

1. LARGER magnesium element for longer life and greater acid neutralizing capacity.
2. LARGER, more powerful magnet for greater abrasive pick-up protection.
3. LOWER PRICE. Because we sell more, we can sell at a lower price. (Guaranteed superior to others costing up to \$2.95.)

Money Back Guarantee
Install a NEUTRA-PLUG, use it 30 days. Then, note the beard of metal shavings... the lack of sludge in your oil! If you're not convinced NEUTRA-PLUG can save you a costly overhaul, return it for prompt, full refund.

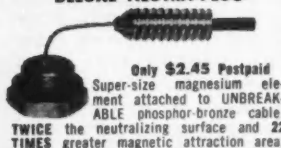
Stops Acid Etching!

Active-magnesium element neutralizes corrosive engine acids. Protects precision engine parts and surfaces.

Stops Abrasive Action!

Powerful Alnico magnet traps ferrous metal wear splinters. Keeps them from circulating with oil through your engine.

DELUXE NEUTRA-PLUG



DEALERS! JOBBERS!

NEUTRA-PLUG sells fast because it's needed by every car owner. Write today for full information or telephone Raymond 3-4978!

MAIL COUPON and you may save up to \$100 & more!

ENGINE ACCESSORIES MFG. CO., Dept. 518
5801 E. Beverly Blvd., Los Angeles 22, Calif.
Gentlemen: Please rush my Neutra-plug under your Money Back Guarantee.

- ☐ Send \$2.45 De Luxe NEUTRA-PLUG
☐ Send \$1.95 Standard NEUTRA-PLUG
☐ Full price enclosed, ship postpaid
☐ Ship C.O.D., I will pay postage

CAR MAKE _____ MODEL _____ YEAR _____
Name _____
Address _____ Zone _____
City _____ State _____

World's Largest Manufacturer of Special Auto Parts

LETTERS



EN GARDE

Gentlemen:

It is outside the powers of my imagination why a magazine the caliber of yours should publish a reader's letter expressing such a warped and distorted view of Detroit's products, implying that it is popular opinion. Such a letter was written by Harry L. Mead, Jr., Cambridge, Mass. [Feb. '56 MT].

Surely the opinions expressed by Mr. Mead are not shared by the majority of the driving public and a man depicting such views is conspicuous with his biased misconceptions.

What Detroit cars are built to do, they do. I say, "Thank you, Detroit."

John E. Zinnen

Kansasville, Wis.

MR. OSLER'S ODYSSEY

Gentlemen:

During the last week in December, the *Wall Street Journal* reported new car sales were in the doldrums; so I set out to buy a '56. Having already read *MOTOR TREND*'s January "Buyers Guide" and decided on either a Buick or an Olds, it seemed the 1st thing to do was find prices. I sat down at the phone and called the dealer from whom I had bought the Olds I planned to trade; he never had bothered to follow up in 4 years (alho I told him at the time that I run 2 cars and trade one every 2 years). My approach went like this: I mentioned my name and asked the price of a '56 Super 88 4-door hardtop. He said, "About \$4000." I asked exactly how much, and he answered, "That depends."

I mentioned that *MOTOR TREND* lists the price without freight at \$2836, and asked how he got it up to \$4000.

"Why don't you come look at it? Make you a real price," he rejoined, but he never did ask me to repeat my name and give him my address and phone number. My next call was to a Buick dealer. Deciding to make a canned talk out of it, I asked the price of a 4-door Century hardtop and again I heard, "Around \$4000." I suggested that he be more specific and give me the base price. He had to go get his price list, but he was specific: "Base price is \$3457. We'd be glad to order it for you." That was all. Never [even] suggested a demonstration drive. I used the same approach [on] a 2nd Buick dealer. Got exactly the same answers, and was not asked my address or phone number. Call 4 was to another Oldsmobile dealer; I asked the same questions and got the same answers.

"Base is \$3251.20 here," he finally informed me. After much prodding, the call moved right along to a date for him to bring around a demonstrator. I now dialed another Olds dealer. When I had the prices, I told him that was what I wanted and waited. There was a 10-second silence; finally he broke it, saying, "Be sure to come in and see us if you decide to buy." I told him I'd already made up my mind to buy. "Well, if you decide on Oldsmobile, be sure to see me. Good-bye."

After dinner that night I suggested to my wife that we go out and look. Call No. 6 was a Mercury dealer. This one moved along very nicely. Next was a Pontiac showroom. We progressed to a request from me for a trade-in figure. He said he couldn't give me an exact figure until he knew what I was going to buy. All I had talked about was an 870 hardtop with automatic transmission, dual pipes, heater, power steering, and undercoat.

"You look around, then come back. I'm sure you won't find a better deal."

We left, and he hasn't followed up as of this writing. Call 8 was by phone to another Mercury dealer. When I had the figures, I said, "I'll probably make up my mind tomorrow, don't you want my name?" There was a dead silence. Then he asked, "What's your name? Mine's Potrzebie. If you decide to buy a Mercury, come in and see me."

Next morning I called a new-used dealer advertising "as much as \$1000 off 1956s." I asked if he had a '56 Century or Super 88 hardtop. "No, but here's a regular 88 for \$3695." I told him I could buy a Super 88 from a franchised dealer for less than that. "Wait a minute, I think they're going to cut the price of that car. Yes, they're cutting it right now." (I swear this is true.)

The vast majority of dealers and salesmen don't sell anything; they don't even follow up wide-open leads. The sale of automobiles is a great tribute to advertising that so whets the public desire for a car that people will buy despite the best efforts of automobile salesmen to keep them from it!

Robert W. Osler

Indianapolis 6

OPEN LETTERS TO THE MANUFACTURERS

Dear Sirs:

Since a new car buyer can have practically any rear-end ratio he wants, and can buy the horsepower of his choice, why doesn't some enterprising manufacturer offer various steering ratios?

Responsive steering is far more important than the ability to lay twin streaks of rubber on the road for 4 blocks or to get 3 more mpg than the other guy.

Forest P. Clark

State College, Pa.

Dear Sirs:

When a person spends \$2000 to \$3000 for an automobile, he ought to have some assurance that the bolts and screws holding it together are properly placed, properly tightened and are securely fastened to prevent disintegration of the car.

Invariably, I find that threads are stripped, bolts are loose, doors are sloppily assembled, radiators won't function and you get the impression that the whole car was put together with hairpins and chewing gum.

James Murphy, Chief

Columbus, Ohio

Dept. of Industrial Relations

Gentlemen:

Do the automobiles that are available today fulfill our needs for transportation? ... when we look at the situation not with the eye of the enthusiast for things vehicular, nor with the eye of the cynical car critic, but with the rational eye of logic, we find *Obsolescence!*

Obsolescence occurs in today's auto product much sooner than the automobile's loss of usefulness. ... a car owner actually feels ashamed to drive his car because newer design concepts have continued to be placed on the market every 6 to 12 months since the time he purchased his "Ultimate, Up-to-the-Minute-in-Styling" vehicle. He has every right to be damned sore at the manufacturer that produced that car.

If more attention were paid to the details of manufacture that would lengthen the serviceable life of the product, people would buy a new car, keep it, enjoy it, operate it

economically, then, while it was still in good operating order, be financially able to invest in the next model change. We would eventually evolve into a 2-car-family country and the demand for Detroit's products would remain substantially high to economically maintain employment in the same numbers currently considered feasible [and] net the same or greater profits for the company by not [costing] so much money for retooling changeovers . . . at the same time [it would place] more attention on economy features which would permit the consumer to operate those 2 cars in his garage.
Jerome E. Johnson Warrington, Fla.

CUSTOM CADDY

Dear Sir:

Below is a 1952 Cadillac convertible which I have customized.

The top was chopped 2 inches and the entire car was underslung 1½ inches. The fenders were reworked with metal added in the form of a bonnet over the original tail lights. Tail light at night is visible from the side



thru the 3 red porthole lenses on each side of the car. The center fin was formed from sheet steel and welded onto the rear decklid. The center fin raises with the rear decklid, which is operated by an electric screw jack. R. J. Sigafos, Pres., Loudonville, Ohio
Sigafos Products

THE FEELING IS MUTUAL

Dear Sir:

You are to be commended for good intentions with regard to your MT Book Condensation, "You and Your Car Insurance" [Jan. '56].

However, there is a quote which was in error. May I refer you to page 71 which states: "... to balance the item of lower cost, the average stock company thru its agent claims to give a valuable service which many mutuals do not give."

Specifically, what is the valuable service they fail to give? Your mutual companies are the oldest form of corporate organization in America, having in fact been established before the country itself (dating back to 1752) and thru the years have exercised prominent leadership in the industry for the benefit of the public.

Wm. E. Swigart, Jr., Pres., Huntingdon, Pa.
Mutual Benefit Insurance Co.

MISPLACED MOUNTAIN

Dear Sir:

Your "From the Back Seat" column [Feb. '56 MT] states that Denver area natives will

see camouflaged cars climbing Pikes Peak. Did you check a map before writing this? Pikes Peak is some 70 miles south of Denver.

Colorado Springs includes Pikes Peak as part of its area. The GM and Ford facilities are actually in Manitou Springs, adjacent to and west of Colorado Springs.

Albert W. Reuter Colorado Springs, Colo.
Denver area natives will see the cars, but they'll need field glasses. Our apologies to the Colorado Springs Chamber of Commerce.
—Editor.

OH HENRY

Dear Sir:

While the Detroit race goes on to build cars bigger and more powerful, my little Henry J still stands up well beside them. It will outrun my 1950 Bel Air Chevy and outperform many newer cars when it comes to pickup and handling. All this and fuel economy too!

Bob Ingle, Jr.

Macon, Ga.

HORSEPOWER AND COOKIES

Dear Sir:

Referring to Mr. Robert Fues' letter [Mar. '56 MT], I really can't imagine any thinking man saying the police department is uninformed when it comes to accidents. He sounds like a little boy who got caught with his hand in the cookie jar and is now mad at the world. I wonder how many citations he has had in the last few months?

Robert H. Henry

VW, ANYONE?

Dear Sirs:

I have noted with interest the rise of the Volkswagen and would appreciate any letters from MT readers as to how the late ones are standing up and how they compare for miles before an overhaul to some of the Big 3.

Ralph Partridge

Cass City, Mich.

HAWK HOWL

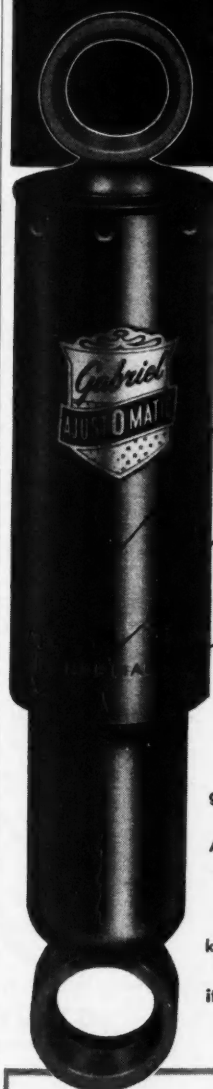
Sir:

Reference is made to your road test of the Studebaker Golden Hawk [Feb. '56 MT]. The article was most interesting—especially the price of \$2800, f.o.b. factory, for the car.

... Imagine my surprise when I rushed down to the dealer and was told that the base price was about \$3800 and with accessories the Hawk would cost close to \$4500.

Benjamin R. Howells Salt Lake City, Utah
We tried to explain this in the March, '56 editorial, "How Much Should it Cost?" but even so we still get a considerable amount of queries like the above. The prices we quote are those furnished to us by the factory as the suggested base factory list price including federal excise tax and suggested dealer handling charges, all optional equipment and any other charges the dealer may pass on to the buyer. It would be virtually impossible, and also undesirable, to buy an utterly stripped car at the price we quote; but it does serve as a yardstick between cars.—Editor.

choose your ride



SOFT

MEDIUM

FIRM

This is the only genuine adjustable shock absorber. A twist of the wrist gives the ride you want—for your make of car, your kind of driving. And only Gabriel has it... Adjustomatic!

Gabriel

AJUST-O-MATIC

SHOCK ABSORBERS

The Gabriel Company • Cleveland, O.

MOTOR

TREND Subscription Dept.

5959 Hollywood Blvd., Los Angeles 28, Calif.

Please enter my name as a MOTOR TREND subscriber for:

☐ One year—\$3.00 ☐ Two years—\$5.00 Above rates for U.S., its possessions, Canada; all other countries: ☐ One year—\$4 ☐ Two years—\$7

Name.....

Street.....

City..... Zone..... State.....

I enclose: ☐ cash ☐ check ☐ money order

Convenient delivery

is one of the big reasons for subscribing to MT. Another is the

\$1.00 Saving

on a two-year order. You won't miss a copy of the great new issues coming up if you send this coupon today...

Greater performance than ever!



presents the NEW

Austin-Healey
100

See it! Drive it! Today!

The new Austin-Healey 100 features new,
close ratio, 4-speed transmission with overdrive
... new front suspension incorporating
taper roller bearings for longer life at
high speeds... larger, more powerful
brakes with anti-fade linings.

Make arrangements for
a test-drive with
your Austin dealer today.



Represented in the United States by **hambro**
AUTOMOTIVE CORPORATION
27-29 W. 57th ST., NEW YORK 19, N. Y.

Sold and serviced through a nationwide network of distributors and dealers.
The Austin-Healey is a product of THE BRITISH MOTOR CORPORATION, LTD.,
Makers of MG, AUSTIN-HEALEY, MAGNETTE, MORRIS, AUSTIN AND RILEY CARS.

World's Newest and Finest Cars in the
World's Newest and Finest Setting!

International Automobile Show

Opening Show in the magnificent \$30,000,000

COLISEUM

Columbus Circle • New York City

**APRIL 28
thru MAY 6**

- Foreign and domestic models from \$1000 to \$25,000
- Exclusive first showings—from 8 different countries
- Complete line of newest accessories, parts and services

• Daily and Nightly STAGE & FASHION presentations



car owner's



LIBRARY

HENRY FORD

by Roger Burlingame

A paper-bound Signet Key Book published by the New American Library of World Literature, 501 Madison Ave., New York 22, N.Y. 35¢ at newsstands.

TO KNOW WHAT went on in the mind of perhaps one of the most controversial figures of our time, Roger Burlingame used the resources of the Ford Motor Co. Archives. Much has been written about Henry Ford, but this reprint of an original hardcover edition by Alfred A. Knopf, Inc. represents a truly impartial record. To read *Henry Ford* is to know the man who built the Model T on the principle of mass production carried to its extreme: "... the multitude would want these things forever and nothing else."

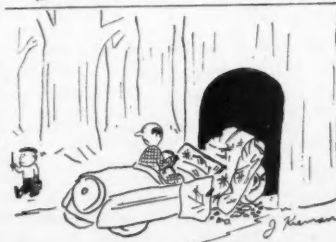
Some of his precepts were strange, causing him to be alternately maligned and praised. As author Burlingame so aptly puts it, "It was Henry Ford's variations from a norm, rather than his conformity to a standard or code, that make him both feared and loved, and that, for many generations to come, will probably cause speculation and wonder about a character who stands so conspicuously in the foreground of American folklore."

Perhaps, as Burlingame says, "... it will be another 50 years before ... a definitive biography can be written." In the meantime, Burlingame's *Henry Ford* will certainly do.

Rand McNally ROAD ATLAS

Published by Rand McNally & Co., Chicago. Available at bookstores in paperback edition for \$1.50; deluxe edition, \$2.95.

THIS NEW CENTENNIAL edition road atlas has 112 pages, with maps of the 48 states, Canada, and Mexico, 45 U.S. cities, and 11 major national parks. Route numbers, road surfaces, points of interest and distances between towns are clearly shown. A comprehensive index lists all counties, important towns and cities. Last year's edition has been a constant source of reference in the MT office; this one will replace it.



Does YOUR Car Get "Shameful Dirty"?

EVERY TIME YOU WASH YOUR CAR DOES IT RAIN CATS AND DOGS?

EASTERN GRIME,
WESTERN DUST,
NORTHERN SLUSH,
SOUTHERN MUD
... WIPE RIGHT OFF
WITH KOZAK
AUTO DRYWASH
SO EASY IT'S AMAZING

ARIZONA: "My car looks better than it ever did, before my KOZAK."
A. E. Worsfold

CALIFORNIA: "I have used the KOZAK on my 1949 Studebaker since I purchased it 3½ years ago. The car still looks new after 47,000 miles. Your KOZAK is all you claim for it."
Stafford W. Bixby

COLORADO: "A friend asked me today what I did to my car to keep it looking so nice all the time. So I told him about the KOZAK and he asked me to get the one I am ordering for him now."
Arthur Brandt

CONNECTICUT: "I have used the KOZAK Auto Dry Wash Cloth for a good many years and have always found it to be all you advertised and more."
Royal W. Wilson

DELAWARE: "We are steady users of your KOZAK Cloths, both for cars and furniture, and we swear by them! I want three more for my family."
Mrs. W. V. Sipple, Jr.

FLORIDA: "Send me three KOZAKS. I am here for the winter and can't get along without the KOZAK, as I use it all the time at home. Nothing like it!"
Lewis S. Milner

GEORGIA: "The KOZAK is really a wonder. I enjoy using it." W. H. Davis

INDIANA: "I was a doubting Thomas when I read your letter describing the dry-wash method. I took a chance and ordered one KOZAK. I am amazed at the results. Your statements are not the least bit out of line with actual facts."
F. L. Wiatrowski

IDAHO: "I am sending you an order for a new supply of KOZAKS. A few days ago when I stopped at the garage where I bought my car (a 1950 Dodge) the proprietor said: 'How do you keep your car so bright in this dust? I wash mine about twice a week, but yours is always clean, looking just like it came out of a hand-box!' I told him I use a KOZAK Cloth on it! It takes me about ten minutes to go over my car."
Don Martin

ILLINOIS: "I really got more than I expected in the KOZAK. I was amazed the way they cleaned my car after 30 days dirt. I would call the KOZAK the magic cloth."
Arthur Higgins

IOWA: "We have a new shoal green Cadillac and KOZAK makes it very easy to keep looking new."
E. D. DeMoss

KENTUCKY: "Enclosed check for a KOZAK Cloth. Have used one for several years and think it is wonderful."
Mrs. S. S. Yantis

LOUISIANA: "The KOZAKS are surely fine. I will not be without them as long as I have a car." A. M. Trudeau

© Kozak Auto Dry Wash

NOW for Less Than 4c A Week Your Car Is Shiny Clean, "Proud Looking" I Super-Safe Kozak DRYWASH Cloth (Over 10 Million Already Used) Cleans and Protects Finish. Kozak Needs No Water. No Sloppy Bucket or Hose, No Sponge, No Rags, No Cold Hands or Wet Feet. Gives You a Year of Gleaming "New-Car Look" for Only \$2. So Fast and Easy It's a Joy to Use. Try Kozak 30 Days. Costs You Nothing Unless You Say "GREAT"!

YOU can DRY wash your car in just a few minutes with the amazing Kozak cloth that costs you only \$2 and is good for from 50 to 100 uses. Yes... just a few minutes and your car can be gleaming clean every day... its factory-finish PRESERVED and IMPROVED. And you save 80% of your expense for wet-washing at today's prices of \$1.50 and up.

Unlike wet-washing that drives dirt into body joints and causes body squeaks... frozen doors, locks, windows... DRY washing with the EASY-TO-USE Kozak continues factory-polishing methods... PROTECTS and IMPROVES the gloss or sheen of your car. People who never heard of a Kozak often write on their first order:

"I don't believe it... but I'll try it!"

So you won't be the first nice car owner to be astounded... delighted... with the looks of your Kozak car. From thousands of car owners all over the United States, enthusiastic letters come in the mail every day telling of the effectiveness and savings gained.

Saves its cost every time used... and keeps on doing it for months!

What else can you think of that saves its cost the very first time you use it? And then keeps on week after week. Kozak is truly the "miracle" cloth as so many users say. What's more, regular use of Kozak pays off in such higher trade-in allowances that it often runs into as much as several hundred dollars more.

Order the biggest bargain in car care right now — A Kozak! Prove to yourself... **ON OUR MONEY BACK GUARANTEE**... how easy it is to save \$50-\$100 for wet-washing your car by switching to DRY washing with the only and original Kozak Auto DRY wash cloth, which trademarks are registered in the Patent Office in both U.S. and Canada for your protection, to make sure you get what you ask for.

"Made by people you can depend on to do the right thing"

Here Is How Your KOZAK Is Guaranteed

Use your Kozak DRYWASH Cloth for 30 days. If you are not delighted with its speed and ease, and with the clean bright look of your car every time you use it... **AND** if you do not agree it has saved you its cost many times over... just write and the money you have paid will be refunded in full immediately. You do not have to return the Kozak. We have saved car owners thousands of dollars, helped keep their cars looking clean and new for 30 years. We fully expect to please you too or it's no sale and no pay. On this unconditional guarantee tear out and mail the coupon now.

KOZAK AUTO DRYWASH
350 S. Lyon Street
BATAVIA, N. Y.

What a KOZAK DRYWASH Does:

- Removes dirt.
- Polishes as it cleans.
- Saves time and work.
- No hose needed—summer or winter... no pressure moisture to rust springs and start squeaks.
- It's safe—over 10 million used.
- Protects the finish.

Unconditionally guaranteed to give you a bright clean car fast, easy, safe, or your money back at once!

No other cloth or cleaner on the market gives your car a better tested safe DRY-WASH action. Kozak is the ORIGINAL and ONLY Auto Drywash Cloth. There is no other way to have a clean car for only 4c a Drywash. Kozak keeps the showroom finish on your new car — revitalizes the clean bright shine of paint and chrome on your older car — helps get you a bigger allowance when you trade-in, as reported by thousands of Kozak users.

HAVE A CLEAN, "NEW LOOKING" CAR IN ONLY MINUTES—NO MATTER WHERE YOU LIVE OR DRIVE—NO MATTER HOW OFTEN IT RAINS OR SNOWS

MAINE: "Send me two more of your KOZAK Cloths. I have used one KOZAK all winter on my car and have not had to wet-wash it once. I am sold."
Theodore Wood

MARYLAND: "I am a private chauffeur. I take care of five cars. I am still using the KOZAK Cloth I got from you, and it is just wonderful."
J. Whittington

MISSOURI: "Have used them for several years on all our Funeral Automobiles. All you advertise them to be, do not want to be without them."
Merle Shepard

NEW JERSEY: "I have been using the KOZAK for the past six months, and I am amazed at the very fine condition it has kept my car in. Dirt vanishes and the car is as brilliant and shiny as new. Send me three more KOZAKS."
H. H. Furber

NEBRASKA: "I would not be without the KOZAK. With very little effort I am able to keep my car clean and new-looking at all times, and have eliminated many costly wet-wash jobs. Please send me five more as soon as possible."
Edward G. Erlewine

NORTH CAROLINA: "Never saw anything to equal the KOZAK for an automobile. My car hasn't had a water-wash in six months, and looks better. Here's check for another KOZAK."
C. R. Ricker

OHIO: "I highly recommend your KOZAK Cloth. It has kept my 1951 Plymouth looking clean and new all the time, to say nothing of the money saved in not having the car washed."
Mrs. Jessie W. Friedmann

PENNSYLVANIA: "I have been using your KOZAK Cloth for about ten years. My 1948 car has been water-washed twice in that time and then only when it was Simonized. Many people ask me if I had my car painted."
E. A. Puderbaugh

UTAH: "I have used your KOZAK Cloths for my cars for the past 15 years. They have given me entire satisfaction. Everybody admires my car. I inform them that KOZAK Auto Dry Wash does the trick. I can recommend them highly."
A. D. Sargent

© U.S. Pat. Off., Canada

KOZAK 350 So. Lyon St., Batavia, N. Y.

Please send postpaid at once:
REG. \$2 KOZAKS
(millions use them)

☐ 1 for \$2

☐ SPECIAL INTRODUCTORY OFFER
2 Reg. (\$4) plus 1 Super (\$3)—\$7 value—\$5.00

SUPER \$3 KOZAKS
(lasts four times longer)

☐ 1 for \$3

Enclosed: ☐ check ☐ cash

NEW Corvette V8

SPECIFICATIONS

ENGINE

Valve-in-head design, 265-cubic-inch displacement, 3.75" bore x 3.0" stroke, 225 h.p. at 5200 r.p.m. Torque 270 foot-pounds at 3600 r.p.m. Special high-lift camshaft, high-speed valve system with mechanical lifters. Deep-ribbed cast aluminum rocker covers. 12-volt electrical system.

TRANSMISSIONS

Choice of special high-performance 3-speed close-ratio Synchro-Mesh (2.2:1 low and reverse, 1.31:1 second, 1:1 high) with high-capacity 10-inch coil-spring clutch, or optional Powerglide special automatic transmission with floor-mounted range selector. Rear axle 3.55:1 ratio standard, 3.27:1 ratio optional with 3-speed transmission.

INTERIOR FEATURES

Vinyl-covered bucket seats with safety belt optional at extra cost. Ash tray and glove compartment between seats. Instrument panel with vinyl-covered top is standard with speedometer, tachometer, ammeter, fuel level, oil pressure and coolant temperature gauges.

COLORS

Onyx Black with Red interior and Black or White top; Venetian Red with Red interior and Beige or White top; Cascade Green with Beige interior and Beige or White top; Aztec Copper with Beige interior and Beige or White top; Arctic Blue with Beige or Red interior and Beige or White top; Polo White with Red interior and White or Black top.

In addition to solid colors, the indented side panels are available painted to contrast or harmonize with over-all body color as follows:

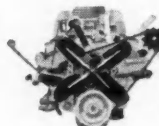
BODY	INDENT
Black.....	Silver
Copper.....	Beige
Green.....	Dark Green
Blue.....	Dark Blue
Red.....	Beige
White.....	Silver

FEATURES

New floor-mounted, close-ratio "stick" shift provides the split-second up- and down-shifting gear control demanded by the pros.



New high-compression cylinder heads on Corvette's 225-h.p. Turbo-Fire special V8 engine up compression ratio to 9.25:1.



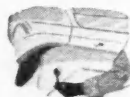
Eight-jet carburetion for take-offs and additional horsepower is offered by Corvette's new dual 4-barrel carburetors.



New styling matches Corvette's advancements in performance. Immediately apparent are the new graceful fender lines, new side panel and hood treatment.

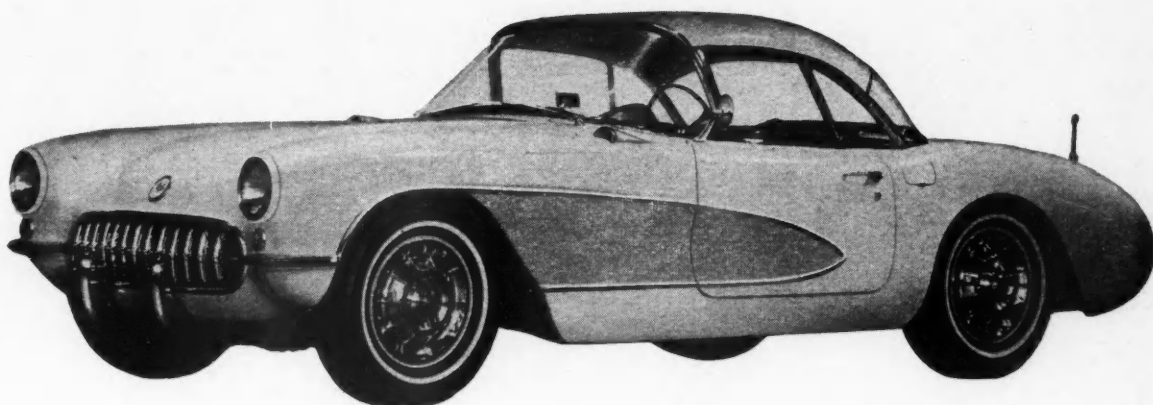


Convenient roll-up regulators quickly raise or lower new windows. Power window lifts available at extra cost.



Corvette convertible now offers a power-operated top as standard equipment, and makes available a plastic all-weather hardtop at extra cost.





with Close-ratio Stick Shift!

If, after thorough evaluation of the specification data on the opposite page, you have come to the conclusion that a significant revolution is afoot — *wait!*

Just wait until the actual performance figures are released through this and other publications. You will see an acceleration graph that will (for instance) spotlight low-gear pickup which will well define Corvette's competitive status. And that's only the beginning of the surprises that await you.

And, if you can't wait to see the published figures, see your Chevrolet dealer. There you can see the new Corvette — and best of all, try it for yourself!

by Don MacDonald and



18 MOTOR TREND/APRIL 1956

A composite of this 5-year-old design, which is now on most used cars, is the 1950, frankly, with putting into a time capsule. The Excess of the unit, stub from the rear. There would have startled anyone if an identical car was available before the war. About the only cars were in a growing crop of potentially high-compression V8 engines, and several new varieties of automatic transmissions.

The industry as a whole resisted the impulse to span 10 years' evolution in one swoop, because they were, and still are, haunted by the ghosts of Cord, Lincoln-Zephyr, and Chrysler Airflow. These were all 10 years ahead of their time as far as the buying public was concerned, but dismal flops saleswise.

In other words, it was and still is you, the buying public, whose inherent conservatism precludes any manufacturer's gambling on a car that is really new. He correctly and safely predicts that you want your changes in small doses, even if he must stifle his talents and resources to comply.

This year's crop of dream cars accurately predicts features that will be universally available in 1960. Relatively speaking, however, there is not one (with the exception of the Firebird, which we treat separately on page 28) that is as radical as the rear-engine Tucker was in its day, or the Cord in its time. We should be driving them now, the war notwithstanding, so let's analyze what we won't own until 4 years from now.

The car of 1960 will not be styled to resemble either a tear-drop or a wingless aircraft. The higher-priced prestige makes

clearly recognizable. Packards, Imperials, and maintained by the grille.

perpetuate the vertical theme, as on the and may be joined by competition, for ob- signer in the Oldsmobile studio goes along—witness the Golden Rocket (D). There is much that is practical in this approach, because the vertical section can look like a grille and act as a crash guard. Air is allowed in thru unobtrusive scoops.

Then comes the pure scoop school itself, such as on Pontiac's Club de Mer (E). Why have a grille at all, as the bars or latticework serve only to obstruct air flow? It is not too much to imagine that this might incorporate a variable opening, controlled by the driver for quicker warmup.

Lastly, there is the sound conception that the whole grille should act as a bumper, necessitating a shape that might evolve into one like the Buick Centurion's (F), and currently exemplified by the familiar '56 Oldsmobile. This will be popular because stylists as a tribe abhor bumpers.

Not one of the dream cars boasts a front bumper worthy of the name. They don't have to, of course, because they won't be subjected to the rigors of American traffic. As long as we continue to park like a freight train stopping, stylists must provide



CONTINUED

I HAD A DREAM Which Was

Ford Barchin wasn't the only one. So many cars were in the air.

by Don MacDonald and John Beeth

W E SOMETIMES WONDER what cars would be like now if World War II had never happened. Would missing cars be the sleeker, more aerodynamic down-on-the-road pages actually be old production stuff, with the dreams abandoned accordingly? The answer is "yes." The cars that were shelved during the 3-year war years, 1941 and 1942 to mid-1945, also did creative thinking.

Stylists were practicing on the rifle range or perhaps offering themselves as targets for others on Guadalcanal or in North Africa. Engineers were designing tanks and a myriad other war-time necessities. Nobody cared or thought about any car other than a Jeep or 6 by 6.

When it was all over, the stylist dusted off his sketch pad, the engineer his slide rule, and the buying public expected miracles. They were not forthcoming—let's face it. Tooling, which was all new for many '42 models, had hardly been broken in. That year, for example, Ford produced only about 20,000 units. The object was to turn out transportation, and the easiest, quickest way to do it was to dust off the 1942 design and give it a 1946 title.

The only all-new cars to make their appearance in any quantity were the Kaiser-Frazer offerings, and, in 1947, the Studebaker. Competitors of the latter even criticized the upstart from South Bend for trying to upset the equilibrium of the comfortable seller's market.

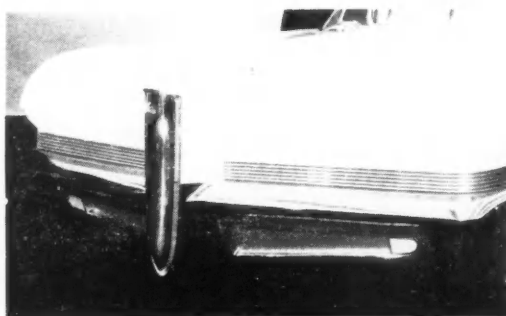
Most companies knew that the need for transportation (no selling, styling, or engineering effort really required) would show signs of ending by 1948 and be over by 1950. Stylists and engineers, working 2 to 3 years in advance, were in most cases ready with what would normally in peacetime have been the 1945 model.



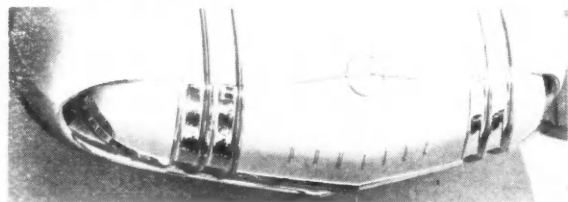
A



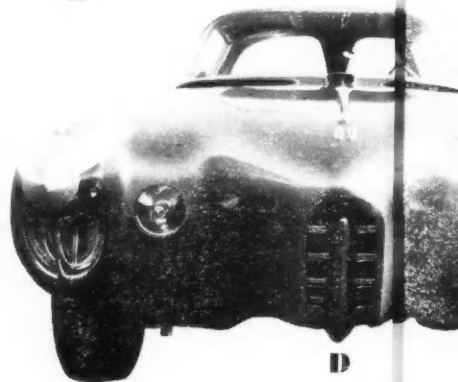
B



C



E



D

Not All a Dream

A composite of this 5-year-old dream car is for sale now on most used car lots for about \$150, frankly not worth putting into a time capsule for posterity. Except for Hudson's semi-unit, stub frame construction (and of course, Nash, which had a full underground chassis by 1933), almost design elements of the 1930s are evident, even from the sides. Nothing new in the rear. There wasn't a car whose rear would have startled anyone if an identical model had been available before the war. About the only real advances were in a growing crop of potentially high-compression V8 engines, and several new varieties of automatic transmissions.

The industry as a whole resisted the impulse to span 10 years' evolution in one swoop, because they were, and still are, haunted by the ghosts of Cord, Lincoln-Zephyr, and Chrysler Airflow. These were all 10 years ahead of their time as far as the buying public was concerned, but dismal flops saleswise.

In other words, it was and still is you, the buying public, whose inherent conservatism precludes any manufacturer's gambling on a car that is really new. He correctly and safely predicts that you want your changes in small doses, even if he must stifle his talents and resources to comply.

This year's crop of dream cars accurately predicts features that will be universally available in 1960. Relatively speaking, however, there is not one (with the exception of the Firebird, which we treat separately on page 28) that is as radical as the rear-engine Tucker was in its day, or the Cord in its time. We should be driving them now, the war notwithstanding, so let's analyze what we won't own until 4 years from now.

The car of 1960 will not be styled to resemble either a teardrop or a wingless aircraft. The higher-priced prestige makes

it clearly recognizable as a Packard, Imperials, or what have you, because identity will be maintained by the grille.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

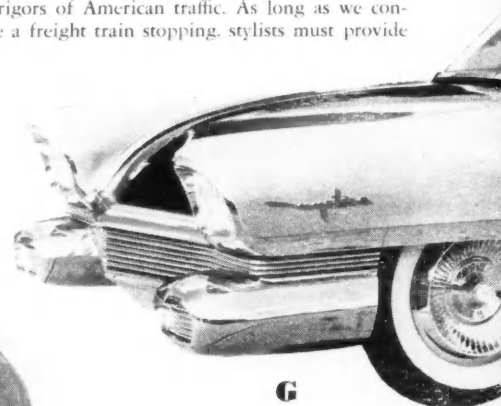
will all agree that the front of the car is the most important part of the design.

Most everyone who can start from the front

will all agree that the front of the car is the most important part of the design.



F

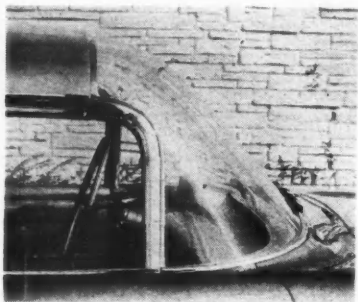


G

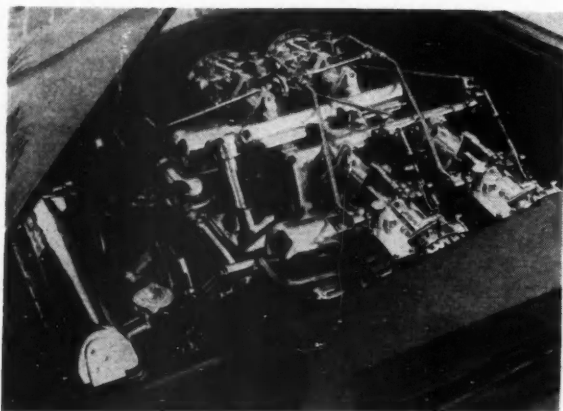
CONTINUED



H



I



J



K

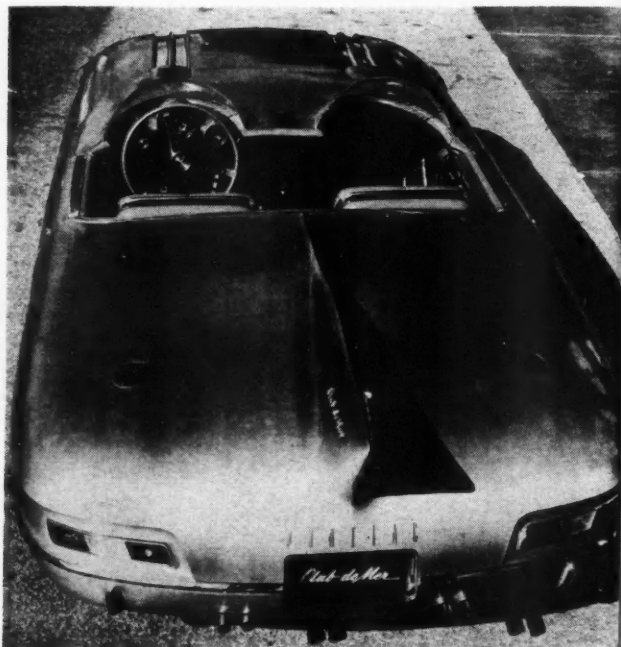
these on production models, but they will look like the redundant appendages they are, front and rear. The only ways out are faired- and painted-in panels of plastic or spring steel stock, or rubber inserts with a flexible, plasticized paint. Look for insurance-company pressure, tho, to eliminate Dagmars such as sported by current Lincolns, Cadillacs and Ford's *Mystère* (G).

Retractable headlights, as old as the Cord, will remain a dream, for the simple reason that the mechanism is both expensive and unreliable, due to mud, rust or ice. Front ends will gain interest from quadruple headlight installations, or entirely new concepts in reflector design, hinted at in Oldsmobile's *Golden Rocket* (H), exemplified by the *Firebird*, page 28. This can't happen until politicians relinquish their control of headlight design, but they will have done so by 1960.

Windshields will be wrapped over as in the *Impala* (I), as well as around. Look for this as early as next year on some bellwether GM and Ford products, but the masses will not follow until later. Simple, straight cornerposts would be desirable rather than the draped shapes, but glaziers have not yet found a way to prevent wrinkling in the complex corners. Sun shading will be a definite problem with these new windshields, and even more so if someone puts out an optional greenhouse model like the *Buick Centurion* (F). One suggestion we have heard is to use Thermopane-like sections (separate sheets with an air space between) and pump colored fluid into the areas where temporary shade is desired.

If the *Centurion* engine (J) is representative, mechanics will have to work with the aid of dental mirrors and bronchoscopes. The 1960 car may well have a collection of bumps in the hood, arranged symmetrically of course, but designed to get around protruding parts that just can't be stuffed in anywhere else under the hood.

The rear view of a *Gibson girl*, pleasing to our fathers, will appear on more and more cars, thanks 1st to Cadillac fins (K), and, more lately, to Virgil Exner's "Flight Sweep." Stylists claim that fins give the car a lift in the rear, like Pontiac's *Club de Mer* (L). It caters to the younger jet-aircraft-minded crowd; planes with tails lifted in takeoff do look light and fleet. Round-



L



M



N

ed rears like the Impala's (M), even tho esthetically cleaner, do not reflect the trend.

Rear lighting will take 2 roads, both more elaborate than anything you pass today. Some (K, L, M), like a modernized version of the old Pierce-Arrow approach, featuring separate units for each function. Others will use the Firebird philosophy, hiding the bulbs but utilizing a vast chromed reflector to give out signals 2nd-hand. This fits in with a tendency to make cars look as if they could top 100 in either direction, like Studebaker's Golden Hawk. To be different, a few will continue to sculpture lighting into the rear fender the way designers did on Mercury's X-M (N).

One area that cries for creative thinking is the rear deck. Only the Firebird II out of all of this year's crop of show cars offers anything new. Why not a drawer-like arrangement to slide in and out on ball bearings? At least it would keep the need for a trunk lid from shaping the rear of the car. Spare tires, at any rate, will disappear, allowing lower designs.

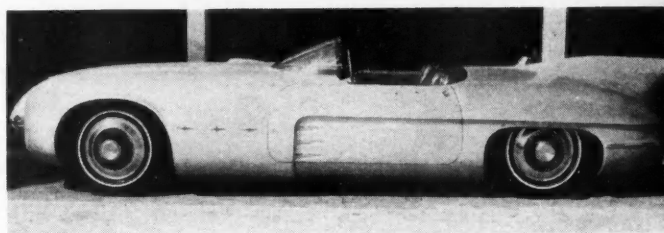
Sculptured, concave sides (B, O) are dependent for their advent—in force—on progress in cutting down tooling costs, or, more specifically, being able to tool up anew with each new model. This could well be true in 1960 because projected volume of the 5 or 6 top sellers would warrant the step.

Sculpturing the side panels has advantages other than eliminating the convenience of 2- and 3-toning paint and rerouting chrome to distinguish one year's model from another. Tool and die men applaud the possibility, as a sculptured piece of sheet metal is infinitely stronger than a slab of equivalent gauge. Lift up the mat and look at your floorboard to prove the point.

These side indentations cannot be much deeper than an inch, for crank-down windows will still be with us in most makes in 1960, and there must be room left for the glass to nestle. Real sculpturing can come only with the advent of standard air-conditioning (windows fixed permanently), or else on windowless roadsters like the Club de Mer (O), never a big seller, now or in the future.

Doors will have a high sill of necessity. The only way to achieve this is by unit construction or else stub (partial) frames shaped like a cow's belly. Transmissions, for the same necessity, must be rear mounted, and to keep unsprung weight down this means a de Dion or swing axle arrangement. Electric pushbutton controls can be placed in a variety of locations, even on the roof as on Packard's Predictor (P), but will be universal.

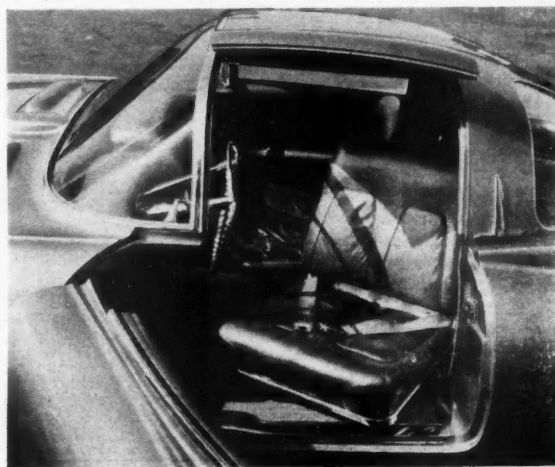
The "low look" of 1960 will require some variety of encroachment of the door into the roof as on the Golden Rocket (Q), or else you'll have to do deep knee bends to get in. Packard's version operates like a rolltop desk, and has the advantage that it can be left open while the car is in motion. GM seems to prefer wing-like inserts mechanically keyed to open and close with the doors. Most likely 1st production version (perhaps as soon as 1957) will be (Continued on page 56)



O



P



Q



OLDSMOBILE ROAD TEST

*More horsepower
and greater weight
produce an
interesting but not
unexpected result*

AN MT RESEARCH REPORT

A STORY heard around Detroit recently had it that the fabulous Mercedes-Benz race car carrier (a 100-mph truck which visited the city) had won an impromptu drag race from an Oldsmobile. Another story came last year from an MT reader who knew of a quarter horse that had beaten a Cadillac but was sure that his '55 Olds could take the horse. In one case the year and model of the Olds was known, in the other it wasn't—but it doesn't seem to make any difference. Olds owners of recent years have acquired a certain complacency about their cars, non-Olds owners have considered it a good day when they bested one. Olds had a certain something that made it very much at home in fast company (it still is), but the new Olds is likely to gain a reputation that will label it much more than simply a hot car. This '56 road test shows what that reputation will be.

Test car: Middle-of-the-line Super 88 4-door hardtop (the 1st such body model tested by MT) with new Jetaway Hydra-Matic, power steering and brakes, radio

(with rear-seat speaker), heater, dual exhausts, padded dash, and a not-too-common traffic-light-viewing prism.

EASE OF DRIVING

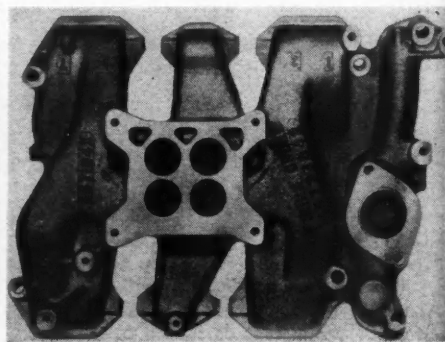
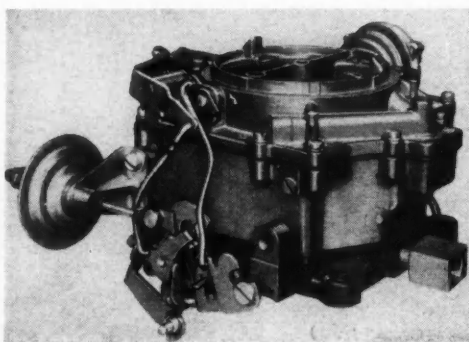
Faster 19 to 1 steering ratio (21 to 1 in '55), plus a reduction of one pound in necessary effort to gain power assist, makes Olds easier to drive than ever. A new flexible coupling in the steering shaft eliminates road shock but not road feel. Despite size, test car was easy to maneuver in traffic, no chore to park. No steering trouble on rough roads, and on cartracks it's the next best thing to a streetcar. If you go off the road there's some body lurch, but the steering wheel won't spin or bounce. All this ease is accompanied by enough wheel turns (4 from lock to lock) to make you do quite a lot of cranking on sharp turns, and for some reason wheel return didn't seem up to par. With power off, it's real work to manage the Olds.

Lots of room and a general feeling of bigness right down to the large steering wheel with grips that you can really use is your 1st and lasting impression behind the

wheel. The wheel itself is higher than some and the average person sits well away from it, but it suited all MT testers to a T. Seats are good soft-firm compromise; seat-back is fairly low and at proper angle to give good support. Accelerator is extra-large and close enough to the tunnel to rest foot during long trips.

Vision is very good, and if the Olds test car is any criterion, GM has just about licked the distortion problem in wrap-arounds. Windshield is deep, and altho the hood is rather high, the view of the road ahead is better than average. Optional prism on test car picked up hanging traffic lights easily with no head or neck craning—it has 4-way adjustment. Vision to rear is fine and unusually good thru rear-view mirror, but tall drivers pay for low-hanging mirror (same position as in '55) with a considerable forward blind spot. There was some glare from the full horn rim, and still more distracting glare from the chromed steering wheel crossbar. No blind spots at windshield posts, and Olds is exceptional in its lack of blind spots at rear-quarter panels.

Oldsmobile's Quadri-jet (4-barrel) carburetor is an important factor in the T-350's 240 hp. The disc at left is a new air valve that operates the secondary venturis for better performance in all speed ranges: closed at low speeds, they open for maximum acceleration and high speeds. For improved breathing, the carburetor is mounted on the new T-branch manifold; both of which have greatly enlarged air passages. Cylinders are numbered from front to rear, even on the right and odd on the left. Firing order, conveniently shown on the manifold, is given as 1-8-7-3-6-5-4-2



Olds' oval speedometer has large numerals, black background, red needle, making it easy to read, altho horn ring can cut your view of it slightly. All instruments except fuel gauge have bowed to warning lights. Hydra-Matic quadrant is perched at bottom of speedometer panel and includes new PARK position. MT testers were pleased to see the switch from an electrically operated indicator (a complaint in the past) to a mechanical type. Olds engineers finally agree that mechanical indicator is more positive. Center-positioned glove box is roomier than most, and dual ash trays have handy flop-open covers that pivot inward to expose actual tray; present no dangerous projection when in use. A small green slot in the ashtray covers tells you just where to push at night. Padded dash eliminated glare from that quarter, but over-generous use of chrome around dash, while it caused no glare, still produced distracting highlights on bright days.

All controls are within reach and work easily. Heat and vent knobs pull out about 3 inches, could be hazard to your knees. Heat controls seem complicated at first (rather critical adjustment is required), tho they are satisfactory once you're used to them. Heater has very fast warm-up time and, with blower on, defrosters are super-efficient. Windshield wipers have fast-slow adjustment (which also affects sweep); sweep fairly well in corners, average in middle of windshield. Washers on test car operated from button in wiper control; worked very well.

Hydra-Matic shift is excellent—lever is at your fingertips, can be operated easily without moving hand from wheel. Very smooth gate between DRIVE, SUPER and LOW, and nearly as smooth into REVERSE. (You could easily wind up in REVERSE during a fast shift to LOW, altho it never happened during test.) This was a malfunction in test car since, on normal Olds, reverse mechanism is hydraulically blocked out when car is rolling. New PARK position on quadrant is welcome addition; dif-

fers from many automatics in that you can start car in either NEUTRAL or PARK (far left of quadrant)—a big boon to starting on hills. Outstanding feature (borrowed from Buick) is foot-operated parking brake. Knob on left releases it; red warning light is good reminder for those unfamiliar with this type of brake.

ROADABILITY

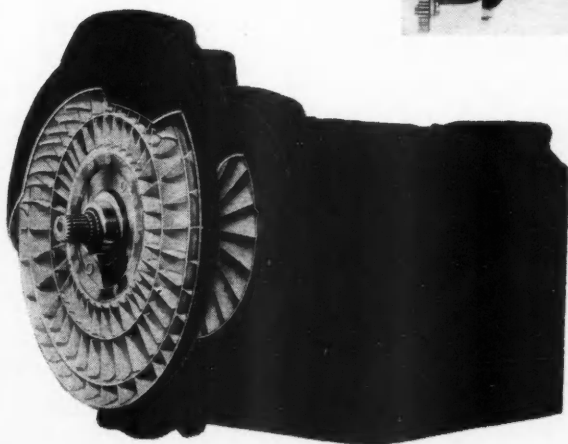
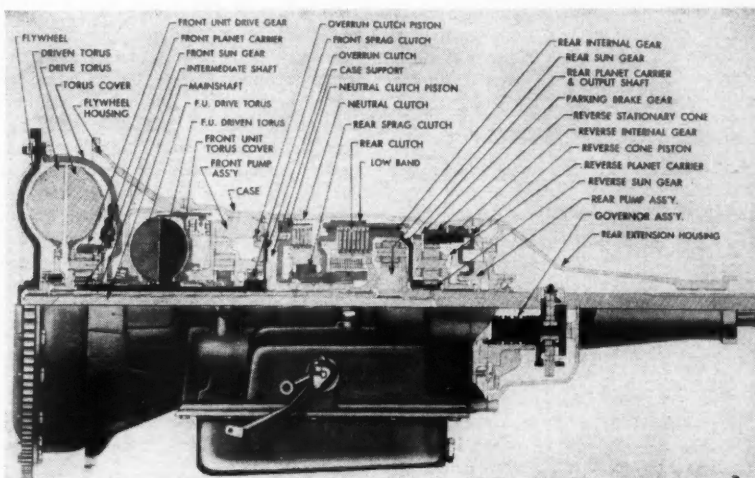
The new Olds feels solidier than it has in the past—deceptively so. One test driver even went so far as to say that he felt he was being fooled. He expected more body movement than the car gave under tough conditions. He decided it came from the feeling of a big car that wasn't "sloppy-big." Minor Olds chassis changes seem to make the car a real road hugger. Front and rear stabilizer bars have been revised for better handling qualities. Improved front wheel control comes from new trunion mounting of the recalibrated shocks, which are still enclosed in the springs. These same factors (along with improved tires) all but eliminate the disturbing tire squeal evident in the '55 test.

On sharp or high-speed curves, car drifts lightly (you'll get a warning) and has no

tendency to slide. There is enough body lean to cause some sliding around for the passengers, but it doesn't seem to affect car's overall stability. (Along with their safety feature, seatbelts would be a good addition to keep you in place if you do a lot of fast driving.) Rough roads or reverse cambers will bring the rear end around, but won't cause any alarm to the driver. In a really bad situation, car will wallow—no loss of control, easy recovery. Car seemed comparatively undisturbed on snow and ice; (the half-throttle downshift is an excellent control factor here) no excessive sliding or lunging under deceleration. Take it easy accelerating on ice, tho, for those 350 available pounds-feet of torque can cause the rear end to fish-tail considerably. Steering control is excellent at all times and at all speeds; dips and bumps don't faze it, no correction necessary on straight roads. All things considered, Olds has definitely jumped up a class in roadability.

RIDE

The same chassis changes that improve roadability have helped ride: particularly the rigidity of the car, which eliminates



The numerous refinements instituted in the '56 Jetaway Hydra-Matic can be seen in the above illustration. The former front friction clutch and bands have been replaced by a torus unit (F.U. drive and driven torus) and 2 sprag clutches (front and rear sprag clutches), thereby eliminating band adjustments and effectively smoothing out shifting pulsations. In 1st and 3rd gears, the 2nd coupling is empty, and the front planetary gear produces part of the gear reduction. Then, in 2nd and 4th gears, the F.U. (2nd) torus unit fills with fluid to effect these shifts and, incidentally, blend all the changes into a continuous flow of power to the rear wheels. At left is another view of the 2 (main and F.U.) torus units. The changes have resulted in a decidedly better transmission in that there seems to be much greater smoothness in operation, combined with a more rugged design

undue wallowing, and the repositioned body mounts which help eliminate shock. To go along with this, the shock absorbers have softer valving. Olds is definitely billing softer ride as a '56 feature, but in most cases you'll find a ride that is improved more thru general stability and lack of shock than thru sheer softness. While there is almost no engine noise (good underhood deadening) or transmission noise, there is considerable road and wind noise. There was lots of noise with front windwings open any amount and hardtop sealing problems seem to add to this. Olds is depending on quality control to improve sealing. On rough roads or going over railroad tracks, you feel the bumps but don't tend to bounce around. Car flattened out nicely after dips without disturbing amount of rebound.

In the rear seat, legroom is definitely restricted, makes the desirability of a 4-door hardtop seem doubtful unless you don't regularly use the rear seat for passengers and can't resist the styling. If it's a matter of children only in the rear seat, they probably won't complain of cramped feeling, and good padding on the front seatback is a built-in safety feature. Heat in rear seat of test car was very good, but again there were wind noises and drafts around the rear-window assembly, along with some rattling. Rear package shelf is flush with top of rear seat, has nothing to stop objects placed there from flying forward during rapid deceleration.

ACCELERATION

The Rocket still has *enough* punch, but virtually all phases of acceleration times turned in by the '56 4-door hardtop were either just about the same or a few tenths of a second slower than the figures we got last year. With an increase of 38 horsepower we expected an improvement. Oldsmobile engineers say that they have turned in better times than the ones we recorded. Our '56 test car was some 140 pounds heavier than the '55 4-door tested last year and of even more importance was the fact that the '55 test was conducted in placid California weather, while the current test took place on an extremely cold Michigan day. Like other MT tests, this one shows the performance you might expect from a car picked at random with no special tuning, as we pick ours.

Transmission changes: Olds engineers say the new Hydra-Matic should have as good or better low-end performance as the '55 version, but the super-smooth shifts, by their nature, seem somewhat less snappy. In the new Hydra-Matic the bands and clutches are replaced with one-way sprag clutches that work along with a small, 2nd fluid coupling which fills and empties with fluid to effect the gear changes. There is also a change in gearing: 1st, 2nd, and 3rd used to be 3.85, 2.63, and 1.45 respectively; are now 3.96, 2.55, 1.55.

We found that it no longer pays off to do any manual shifting to get better acceleration times. The times we turned using various shift patterns never varied more than a couple of tenths of a second from those obtained in straight DRIVE, full-throttle accelerations. A good new feature of the transmission is the part-throttle downshift at speeds under 30 mph. This saves you from going to the full kickdown for a needed surge in traffic. The full-throttle kickdown remains for high-speed acceleration. In passing speeds, the Olds is just about the same as it was in '55. And Olds retains the enthusiastic feeling of *wanting* to go at any speed. The smooth shifts of the new Hydra-Matic and remarkable throttle response will fool you—unless you're watching the speedometer, it's awfully easy to be going 45 or faster and think you're well within a 30-mph speed limit.

This transmission is easily the outstanding one we've encountered in flexibility, comes very close to offering stick-shift qualities with the convenience of not using a clutch.

Engine changes: Fairly minor changes in the 324-cubic-inch Rocket have raised the horsepower from 202 last year to 240 in '56. Torque is prominently noted in current Olds ads as T-350 (332 maximum last year). This power comes from a new square-sectioned, T-intersection type (was curved branch) manifold which mounts a redesigned 4-barrel carburetor with larger bore and venturi size; air valve in secondary barrels to control venturi size according to engine demand. New camshaft gives higher lift to all valves; exhaust valves are $\frac{1}{8}$ -inch larger. A thinner gasket and lower combustion chamber contour (still wedge-shaped) boost compression ratio from 8.5 to 9.25 to 1. Piston heads have been beefed up to take the added strain. Olds engineers say that dual exhausts (offered for 1st time as option in '56) should give car 5 to 7 per cent increase in horsepower, torque, and performance up to 60 mph, along with some added top speed.

BRAKING

The power brake would benefit by a larger pedal, but since it is low set it is one of the best for pivoting. It is still good for left-foot brakers.

In the tough 12-stop brake-fade test, Olds fared nicely. We had no difficulty in holding a 15 feet per second per second figure on the 1st 5 stops. On 7th thru 9th stops, fade set in. The car would stop in 3 or 4 car lengths beyond normal stops, but not at its former rate of deceleration. On 11th and 12th stops, brakes made fine recovery which allowed good deceleration and fairly accurate stops. After 2 minute rest, Olds regained nearly full braking efficiency with just a little more than normal pedal pressure. At no time during actual

test did the car tend to swerve during braking. Nosedown was moderate. After the brakes had cooled, a slight pull to one side developed. We noted happily that even after fade set in, the pedal never went all the way to floor. Olds power brake this year also seemed less touchy to slight pedal pressure you'd normally use in traffic (thanks to brake cylinder refinements); no panic stops when you actually want moderate braking.

With new Hydra-Matic you have an amazingly effective secondary brake. Easy-to-make downshifts to either SUPER (3rd gear) or LOW (2nd and 1st) haul you down smoothly, and LOW's bottom ratio all but stops the car. In light traffic careful manipulation of this transmission can almost preclude the necessity of using the brakes, and be fun besides.

FUEL ECONOMY

For the most part Olds fuel economy has suffered by a comparison with '55 figures (see table). Here the added horses in the engine tend to offset the economizing qualities built into the new Hydra-Matic. And, again, that "want-to-go" attitude of the Olds makes it awfully hard to keep your foot out of that thirsty 4-barrel carburetor—it's enjoyable, but it's costly. In high-speed operation at steady speeds, economy is somewhat improved, but in traffic and on overall tank average your premium fuel (we used Mobilgas Special) bill is going to mount up.

GETTING IN AND OUT

One boon here, and an improvement over '55, is ultra-strong door checks which hold doors open even on steep grades. Plenty of room under steering wheel and column and all around front compartment makes Olds a good bet here for all hands. One slight hitch in leaving car comes from small inside doorhandles positioned in a way that makes them awkward to reach and operate, but you won't catch your coat sleeves in them or open them accidentally with your elbow.

A 4-door hardtop naturally eases rear seat entry, but still not to the point of the roomier 4-door sedan. The roofline drops off sharply in the rear, and passengers have to duck a little, but still nothing like the pretzel act necessary in entering a 2-door hardtop sedan.

HOW WELL IT'S CONSTRUCTED

The test Oldsmobile showed generally very fine workmanship on an overall basis but was notable for spotty flaws. Body fits and exterior trim looked good, and unusually good molding joints around the inside of the windshield frame (a sore spot on many cars) showed attention to that area. However, the sewing on the front seat trim was sloppy, showing unused needle holes and uneven seams. With one of the rear doors closed it was possible to see daylight thru (Continued on page 57)

P E R F O R M A N C E

'56

(240-bhp engine)

ACCELERATION From Standing Start
0-30 mph 3.7 0-60 mph 10.8
Quarter-mile 17.8 and 77 mph

Passing Speeds
30-50 mph 4.6 50-80 mph 11.8

FUEL CONSUMPTION Used Mobilgas Special
Stop-and-Go Driving
11.9 mpg highway trip average
10.0 mpg city driving average
10.2 mpg tank average for 590 miles

Steady Speeds
21.6 mpg @ 30 20.0 mpg @ 45
17.6 mpg @ 60 14.3 mpg @ 75

STOPPING DISTANCE 167 feet from 60 mph

BRAKE FADE Fade on 7th stop from 60 mph
Good recovery on 11th stop
Near complete recovery after 2 minutes

TOP SPEED Fastest run 112.8 Slowest 110.1
Average of 4 runs 111.5

SPEEDOMETER ERROR Read 32 at true 30, 49 at 45,
64 at 60, and 79 at 75

'55

(202-bhp engine)

From Standing Start
0-30 mph 3.3 0-60 mph 10.6
Quarter-mile 17.6 and 79.5 mph

Passing Speeds
30-50 mph 4.5 50-80 mph 11.3

Used Mobilgas Special
Stop-and-Go Driving
11.8 mpg over measured course
12.7 mpg tank average for 1026 miles

Steady Speeds
24.4 mpg @ 30 20.1 mpg @ 45
16.4 mpg @ 60 13.9 mpg @ 75

165 feet from 60 mph

Fastest run 110.4 Slowest 109.2
Average of 4 runs 109.7

Read 31 at true 30, 48 at 45,
64 at 60, and 80 at 75

S P E C I F I C A T I O N S

ENGINE: Ohv V8. Bore 3.87 in. Stroke 3.44 in. Stroke/bore ratio .887:1. Compression ratio 9.2:1. Displacement 324 cu. in. Advertised bhp 240 @ 4000 rpm. Bhp per cu. in. 0.741. Piston travel @ max. bhp 22.3 ft. per min. Max. bmeep 162.9 psi. Max. torque 350 lbs.-ft. @ 2800 rpm.

TRANSMISSION: Standard transmission is 3-speed synchromesh with helical gears. Automatic transmission is Hydra-Matic, 4-speed planetary gearbox with fluid coupling. Over-drive transmission not available.

RATIOS: 1st 3.96, 2nd 2.55, 3rd 1.55, 4th 1.00 Reverse 4.30.

REAR-AXLE RATIOS: Conventional 3.64, Hydra-Matic 3.23.

STEERING: Number of turns lock to lock: mechanical 4.75, power 4.00. Overall ratio: mechanical 27.3:1, power 22.7:1. TYPE: Mechanical, ball nut; power, Saginaw hydraulic booster.

WEIGHT: Test car weight (shipping) 4370 lbs. Test car weight/bhp ratio 18.2:1.

TIRES: 4-ply 7.60 x 15 tubeless.

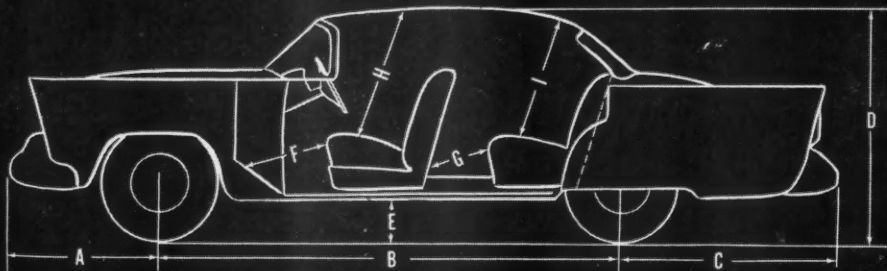
PRICES: (Including suggested retail price at main factory, federal tax, and delivery and handling charges, but not freight.) 88 2-door sedan \$2378, 4-door sedan \$2443, 2-door hardtop \$2555, 4-door hardtop \$2627. SUPER 88 2-door sedan \$2529, 4-door sedan \$2595, 2-door hardtop \$2763, 4-door hardtop \$2836, convertible \$2986. 98 4-door sedan \$3253, 2-door hardtop \$3435, 4-door hardtop \$3506, convertible \$3695.

ACCESSORIES: Hydra-Matic \$188, Jetaway Hydra-Matic \$205, power brakes \$40, power windows \$97, power steering \$108, power seat (6-way) \$93, radios \$103 and \$129, heater \$82, dual exhausts \$41, seat belts (each) \$11, air conditioning \$431.

DIMENSIONS

A FRONT OVERHANG 33.32
B WHEELBASE 122
C REAR OVERHANG 47.97
D OVERALL HEIGHT 62.33 (60.5 loaded)
E MINIMUM GROUND CLEARANCE 6.26 (at frame sidebar)
F FRONT LEGROOM 43.1
G REAR LEGROOM 42.8

H FRONT HEADROOM 35.5
I REAR HEADROOM 33.8
J OVERALL LENGTH 203.29
K OVERALL WIDTH 70.62
L FRONT SHOULDER ROOM 58.2
M REAR SHOULDER ROOM 56.1
N TRUNK CAPACITY N/A

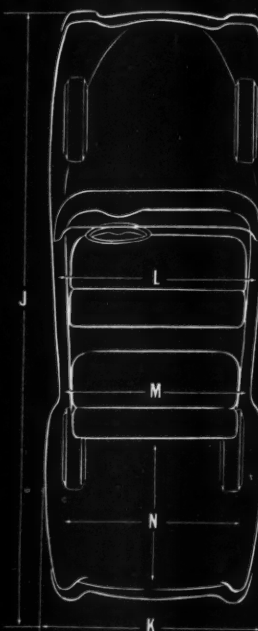


MT ROAD TEST



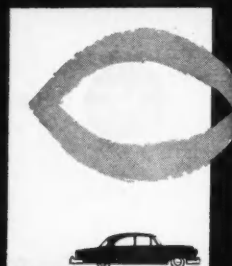
'56 OLDSMOBILE

Super 88 4-door hardtop
with Jetaway Hydramatic





drivescription



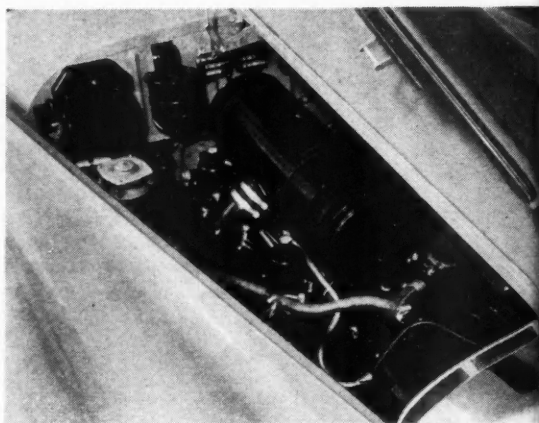
Bentley

DODGING PLATOONS OF TAXIS and elevated pillars in a \$12,000 Bentley saloon (especially someone else's) was frankly a novel and somewhat worrisome experience. But for once I can say I drove a cloud and really mean it since the new Bentley "S" sedan is mechanically and dimensionally identical to the equally new Rolls-Royce Silver Cloud. For the 1st few minutes, I drove as gingerly as you would sit down in a genuine Louis XIV chair.

Within minutes, tho, I had every confidence that I could do anything with the car. It is not so much what it does but how it does it that is so amazing. Factory representative Norman Miller (who was with me), stated flatly that Rolls will not tolerate noise from any component of their cars.

He was not exaggerating; the relatively small (297-cubic-inch), F-head, 6-cylinder engine is one of those rare ones you think has stalled when it is idling. Without being able to time it on city streets, my guess is that the approximately 140-horsepower (Rolls never has published this specification) unit will move the 4100-pound car from 0 to 60 mph in about 13 to 14 seconds.

Altho not publicized as such, Silver Clouds and Bentley S's have standardized on Hydra-Matic, built under license by

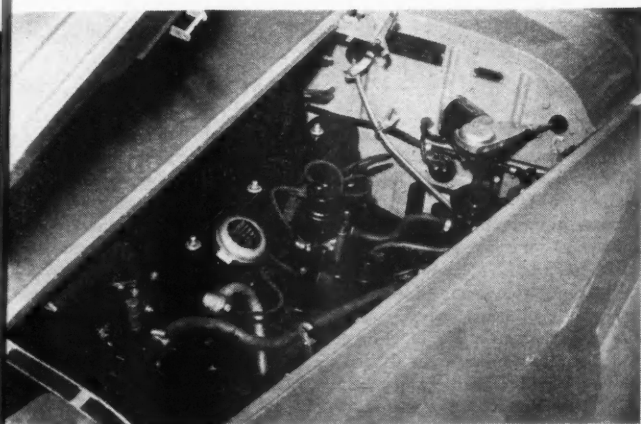
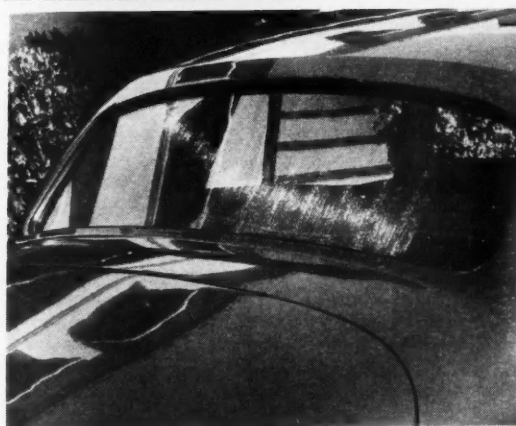
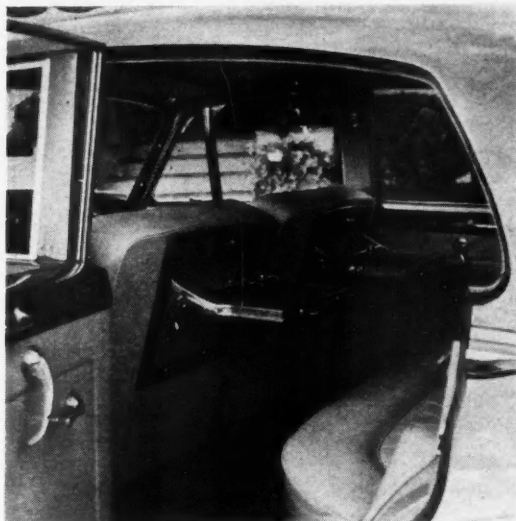


Rolls in England. What they have done to make their Dual-Range version smoother than GM's much-touted new one (as used in current Cadillacs, Oldsmobiles and Pontiacs) must remain a mystery, but smoother it is. Rolls hides production and engineering techniques in a shroud of secrecy.

The convenient selector lever carries an override control which permits manual selection of ranges from 1 thru 4 if so desired, regardless of engine rpms. Using this, the shifting technique can be developed into a fine art by owners who mourn the passing of the standard box from the option list.

Power steering is not available because it is not needed. The 212-inch car parks like a baby carriage, despite the big 8.20 x 15 tires. Cornering even at unreasonable speeds is almost devoid of lean, and totally devoid of tire squeal. Ride is soft by English standards, fairly firm by ours, but sports car stiffness is optional at a flick of the solenoid switch controlling the dual-range shock absorbers.

No switch on a Rolls or Bentley can be so crude as to click; therefore, they are all vacuum actuated unless the mechanism is located beyond earshot like the automatic lid covering the gas filler. One can (and I did) spend undue



time admiring the attention to detail. One key in the set provided fits everything, the other only doors and ignition, on the long shot premise that the parking lot might close down for the night before you return. Without the ignition key in the lock the headlights can be turned off, but not on. The woodwork is solid, hand-polished African mahogany, rather than the troublesome veneer used on some lesser imports.

The hydraulic brakes have a unique mechanical servo, consisting of a metal disc that rotates with the driveshaft and uses its own inertia to multiply pedal effort, regardless of whether the engine is on or off, or whether the car is going forward or backward. I have never encountered a smoother, more positive system and can complain only about the English penchant for a tiny pedal.

All Rolls and Bentleys are covered by a flat 3-year warranty. It is said that the break-in period lasts for the first 100,000 miles. If only the FHA or Veterans Administration could be talked into really long-term financing arrangements, these cars would be of widespread interest as they depreciate percentage-wise much less than even a Chevrolet. As it is, about 100 people a year buy them in the U.S. —Don MacDonald

Editor's Note: Our thanks to J. S. Inskip (304 E. 64th St., New York) for making this one-of-the-1st Bentleys available to us for a driving impression. Westerners interested in new Bentleys and Rolls-Royces can see them at British Motor Cars, San Francisco, and Peter Satori, Pasadena, Calif.



photos by Colin Creitz



BY DON MacDONALD

IN 2 SHORT GENERATIONS the Firebird has made impressive strides towards becoming an inhabitant of your garage. The 1st (MT, Aug. '54) was a projectile-like affair with an inordinate thirst for fuel and room only for its driver (usually Mauri Rose). The current one carries 4 people comfortably with economy about equal to a Buick Roadmaster.

Firebird I was obviously impractical, especially when compared to the contemporary Plymouth turbine car. Few people realized, however, that this was deliberate. It was styled like a land-locked jet airplane to emphasize the fact that, in GM's opinion at least, turbine-powered passenger cars were a long way from production.

Firebird II should be considered a progress report; its styling, roadable chassis, simple controls, economy, and room for the family indicate that the turbine is closer than ever, but still 5 to 10 years away. It is also a test bed for a baker's dozen new ideas, ranging from electric door keys (which work) to an automatic pilot system (which doesn't work as yet). Some of these will be on production cars long before gas turbines are.

BODY FEATURES

There are actually 2 Firebird IIs in existence. One, with a Fiberglas body, is the engineering test car that was used to make the "Highway of the Future" movie featured in Motorama. It can be, and has been, driven on public highways.

The show car is complete in every respect, and identical except that the body was painstakingly formed from titanium. This metal is fairly plentiful on the North American continent, but there is a handful of toiling craftsmen in the Firebird styling studio who at the drop of a hat will tell why it has not been used much commercially, never before for a body.

It works about as easily as spring steel, and you can vigorously apply a coarse metal file for half an hour before the surface is scratched. Remember that the whole outside surface of the Firebird is "brushed," another word for deliberately applied scratches. Welding and bonding techniques had to be invented, as there was no previous experience that would apply. The resulting structure is nearly as light as aluminum, nearly as strong as steel, and one that is impervious to corrosion.

Altho the point is stretched on a couple of items, every styling feature is functional, even the non-spinning spinners on the front. These blades prevent large, airborne objects from getting into the engine air inlet as well as protecting the oil coolers from damage. In the front of the spinners (but not shown in our photos of the plastic car) are electronic pick-up coils that would receive signals from control towers along the highway of the future. The idea is that everyone could relax and play pinocle while the tower operator controls the Firebird electronically. This, of course, assumes other vehicles are so equipped, but it could be done with apparatus that is currently available.

The handleless doors are opened by inserting a magnetized key which activates the wrapover window on that side. This raises up electrically, and you can then reach in and open the door. Closing the door brings down the window. From inside, the reverse operation is pushbutton, tho we advise taking along a can opener should the electrical system fail.

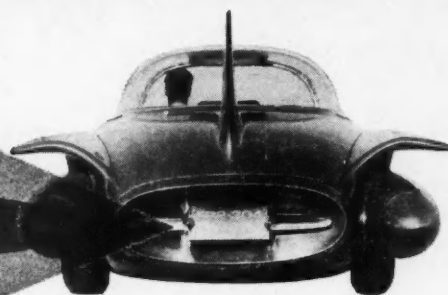
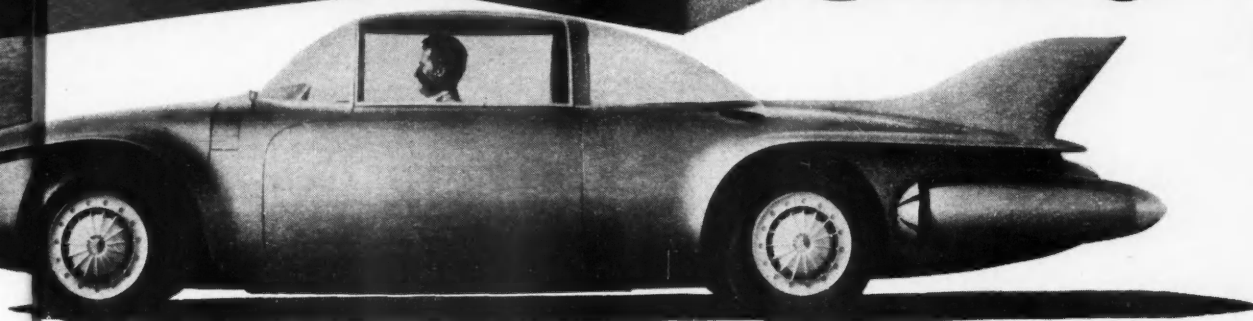
Most wonderful device of all is a freight elevator in the rear deck, complete with 8 fitted pieces of luggage. The dorsal fin on top, besides being a Firebird trademark, is claimed to move the center of pressure from the front to the middle of the car, aiding in directional stability. The 2 bombs behind the rear wheels are each 10 gallon fuel tanks.

It is refreshing to see what can be done with lighting when designers are uninhibited by restrictive state vehicle codes. The Firebird's retractable headlights look like, and are, actually smaller than most parking lights, yet they throw a powerful beam. The turn signals on the end have rotating reflector bulbs which point a beam in the direction of the turn. All rear lights are housed in a single large reflector unit, creating a chromed effect in the daytime and not unlike a glowing jet exhaust at night.

ENGINE

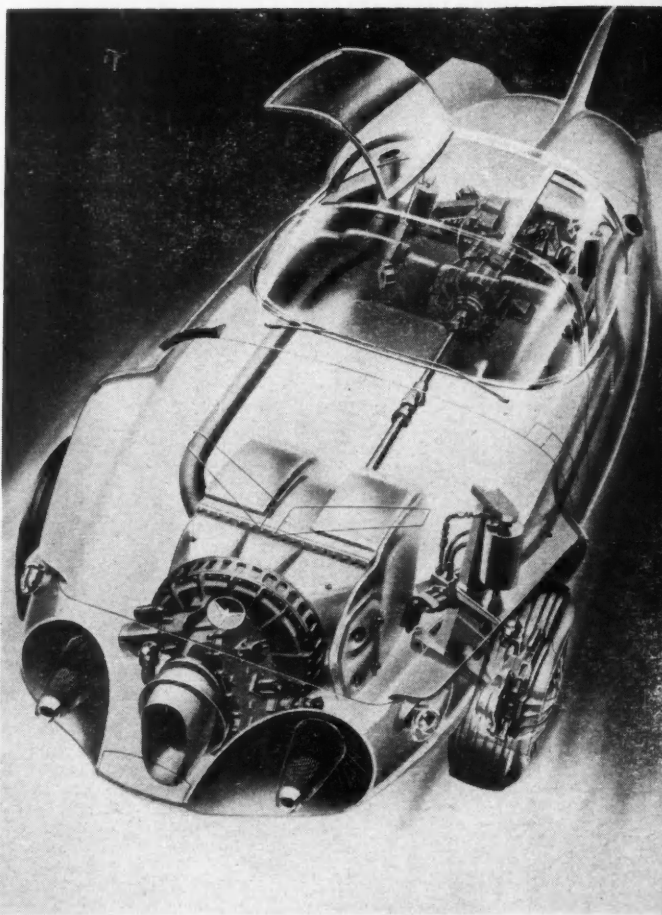
The Firebird II T-304 power unit claims an 80 per cent regenerative efficiency, meaning that it recovers that much of the heat in the exhaust gases to preheat the incoming air. This, plus the claimed shaft horsepower of "over" 200, puts the unit well above that put out by the Chrysler Corp. turbine in its latest form.

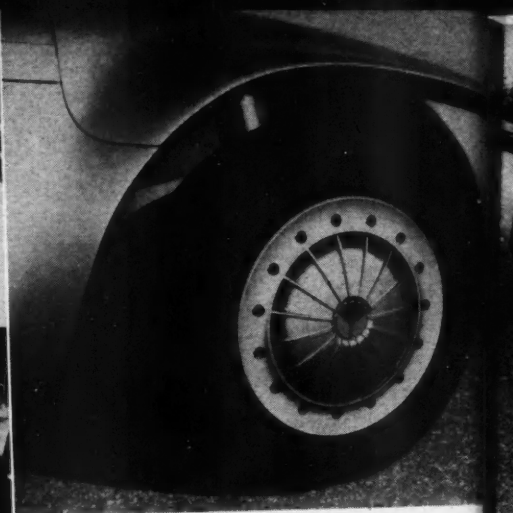
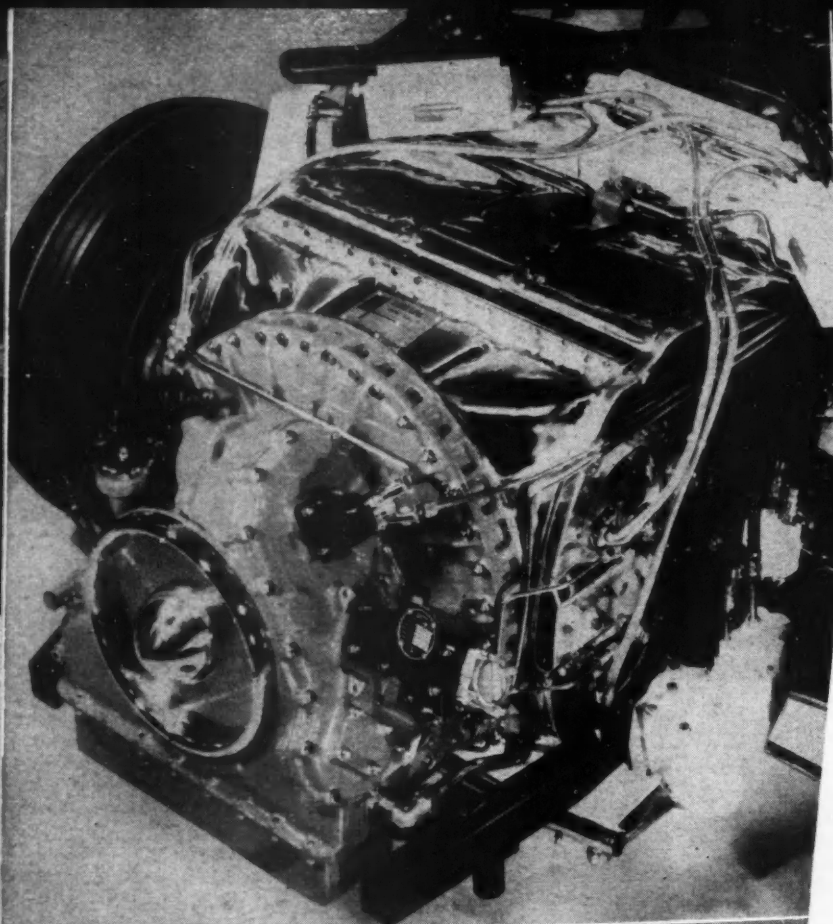
FIREBIRD II



Like other contemporary automotive turbines, T-304 consists essentially of a gasifier section composed of a compressor, combustion chamber, and driving turbine which furnish the oomph to operate the power section, in turn driving the rear wheels thru a 4-speed automatic transmission. The regenerator is of the rotary matrix type, driven off the gasifier shaft so that it will function when the turbine is idling.

The turbine components are, as usual, hidden in a decorative shell to prevent unauthorized understanding of how they work. The mechanical parts are of necessity geographically fixed as described above. Our guess is that the inlet air passes 1st thru the compressor to the high-pressure side of the stainless steel (to prevent corrosion) regenerator matrix. The heated air mixes with vaporized fuel (any refined petroleum other than tar will do) and then blasts thru 2 stages of power turbine. After they have done this work, the still blistering gases are routed back thru the heat exchanger and subsequently exhausted thru outlets in the top of the rear deck with the excess (non-toxic from high-speed operation) spilled out underneath the car. The 2 routes thru the heat exchanger are, of course, completely isolated from one another. **CONTINUED**





X-RAYING THE

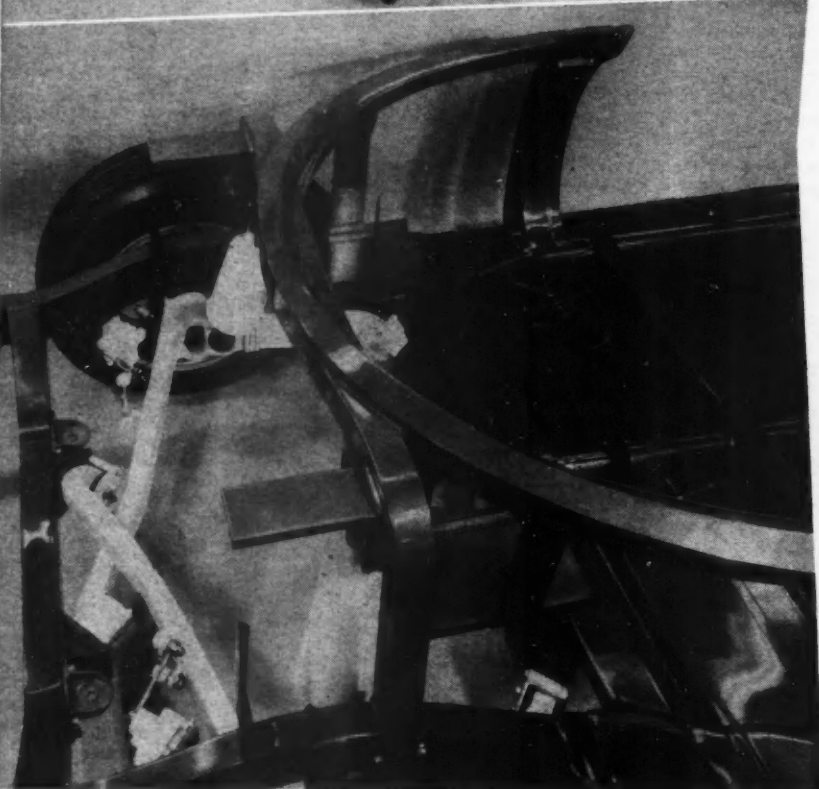
RUNNING GEAR AND CHASSIS

Driving the Firebird II is easier than you might imagine. In a few short days out at GM's Mesa, Ariz., test track, at least 10 of the project engineers checked out the turbine car. You insert the magnetic key and press the starter button. The special Delco-Remy motor brings the gasifier section up to 4000 rpm, at which speed ignition is automatic. The starter continues to assist to 15,000, at which time it and the sparkplugs shut off and the car is ready to put in gear.

You may wonder why a pushbutton controlled, 4-speed automatic transmission is coupled to a turbine, as the turbine itself has every characteristic of a torque converter in the old Dynaflo sense. However, there is a 4 to 5 second lag at a traffic light to reach operating torque with a direct-drive turbine. Lower gears cut down on this considerably. If there were only 2 speeds forward, there would be too much inertia loading on the heavy power turbine at shift time.

The transmission itself is unitized with the differential and mounted on the frame perpendicular to the axis of a swing axle. It is best described as an advanced automatic with characteristics of both Dynaflo and Hydra-Matic, but the gear content and arrangement are highly secret. In any case, it and its rear location are a prototype of future GM production.

Suspension is GM's 1st application of the Delco-Matic air-oil units, another prototype of the near future. It was necessary for the Firebird II, as the low slung mounting of the turbine precluded a conventional A-frame. Differing from the bellows-type units on GMC trucks and buses as well as the Monroe system (March MT), the independent cylinders at each wheel maintain a constant air mass but not volume. Changes in volume are made up by oil from the central hydraulic system (see above), and the air spaces are sealed, eliminating the need for an engine-driven compressor.





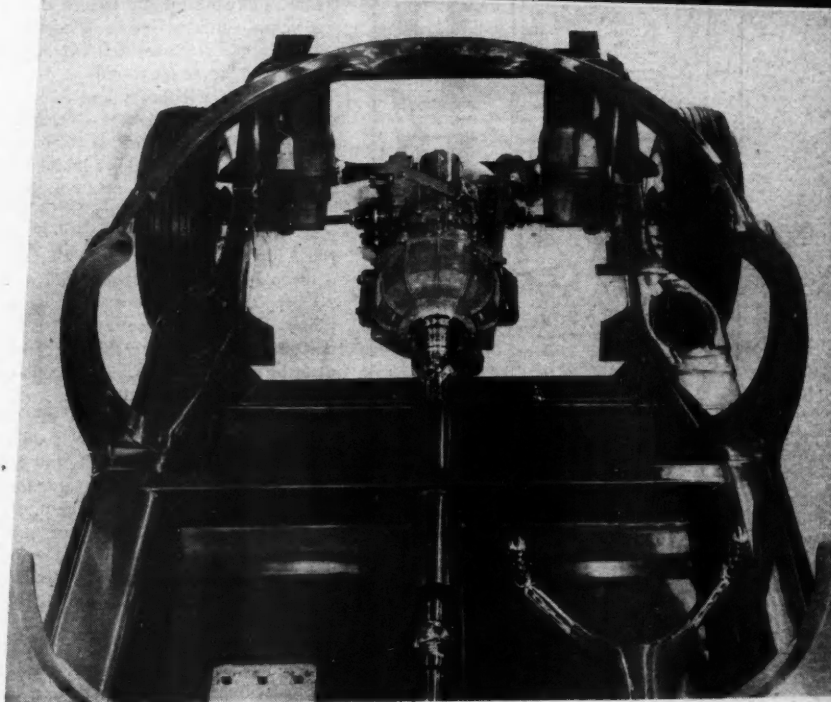
FIREBIRD II continued

All pivot points are permanently lubricated and employ plastic (Teflon) bearing surfaces. These inserts, supplemented by rubber cushions at rear suspension points, provide acoustical insulation between the suspension and body. Shock absorbers are contained in the cylinders. Each wheel is independently leveled by a sensing device connected to the height valves in the hydraulic part of the cylinders, maintaining a constant road clearance regardless of amount or location of load. This setup also provides what amounts to a variable spring constant, meaning that the spring frequency is the same regardless of load.


Moraine Products Division of GM contributed the design for the Firebird's multiple spot disc brakes, called Turbo-X to emphasize the turbo cooling system built into the design. This is claimed to be so effective that no fade sets in even after 50 cycles of 15 feet per second per second decelerations from 60 mph. Only a few of our test cars this year have managed to survive 12 stops without fade.

Such a well-ventilated, multiple spot design completely encased in the wheel would only be possible with a wide base tire and rim combination, such as is on the Firebird. The way stylists we know have enthused about the appearance of a 16-inch wheel and a flat-sectioned tire compared to the forthcoming 14-inch doughnuts, it may be that the trend will be reversed. Lining surface on the spots is of a new and secret alloy, and the system is boosted from the central hydraulic source.

The 120-inch wheelbase Firebird II chassis offers many advantages of unit construction, such as integral cowl and rear deck bracing, but still is not one with the titanium body. Interesting features include routing of the dual exhaust system thru the outer frame rails, wiring and hydraulic lines thru the floor pan, and a breakaway front section for easy engine change. (Continued on page 48)



THE GREAT GEARBOX SWINDLE



The illustration depicts a car repair shop. At the top, a sign reads "Oil and Gearbox Fluid". Below it, a sign says "GUARANTEED ALMOST NEW". To the right, a sign says "NOW \$15". In the center, a mechanic is shown working on a car. To his left, a sign says "ONLY \$70". Below him, a sign says "TRANSMISSION SPECIAL". To the right, a sign says "IT'S ONLY MONEY". At the bottom, a sign says "SUCKER TRAP 20%".

If your car has a transmission, you could be the next victim. Compiled from sad but wise sources, this advice can save you money

by Paul Sorber

SOME GYP ARTISTS and con men are taking a great deal of money from the automotive public, mostly from bargain hunters who can't afford the excess charges. Typical unscrupulous advertisers state: "Any transmission or rear end installed, \$5.74"; "Complete transmission overhaul, \$74.50 installed"; or "All oil, gaskets, and labor, \$5.45." Greasy hands aren't the only things doing dirty work in these shops, as practices ranging from barely legal to plainly illegal will and do buy swimming pools and similar fancy trimmings for those involved. Final bills run 2 and 3 times those of a reputable agency service department or local garage.

TYPICAL "GYPPO" PRACTICES

Gyp operations usually involve "rebuild" junk, inferior or unsuitable parts, and the big lie told with a straight face. "Show-piece" parts in advanced stages of disrepair are kept handy for display to the customer who doesn't watch his transmission being torn down. This is usually accompanied by a nonsense explanation like: "This is why the franistat won't refulgate." Replacement gears with chipped and brazed teeth, worn bushings, and worse have been found in exchanged transmissions. An example of sneaky practice is the adjusting nut gimmick. You're told, perhaps shown, that the actuating bands are worn out and must be replaced, and you are charged for a new set. By replacing the existing adjusting nut with a longer one (worth about 35¢), the old and badly worn bands are tightened so that they will work, at least until you get out of the gyp's shop. You won't be able to see any of the work being done of course, probably on the excuse that their insurance company hasn't allowed spectators since a customer fell in the grease pit and was never recovered.

Maybe you will be sucked in by a TV ad for a \$10 labor, fluid, and gasket charge. The joker is that only the throttle valve is stuck, but you don't know a throttle valve from a torus member. So they exchange your transmission for a pile of junk without consulting you and charge you \$200 for it, insisting that you "finance it through the credit department" at 14 to 20 per cent a year, quarter, or whatever, plus various service charges and fees, even if you want to pay cash! Unsticking a throttle valve would have cost you about \$10 in any honest shop.

Oh yes, what about that TV ad? Well, that's all you did pay for labor, fluid (they make their own in the cellar), and gaskets cut from old magazines, but you sure paid thru the nose for that wreckage under the floorboards. And the guarantee you got should be framed, just like you were. It's so full of loopholes you might well wonder how they found room for all the fine print on it.

These characters stay up nights figuring new angles to trap the unwary. As an honest man yourself, you can't be expected to see through every dodge they develop, but

you can make it harder for the gyp and possibly even avoid him completely by learning how to recognize his tactics. As in war, love, and all that, *your best defense is a good offense.*

COMMON CAUSES OF TRANSMISSION BREAKDOWN

Simply repaired defects are the source of most symptoms of malfunction, and a dishonest mechanic will try to sell an overhaul on every one. Oil, gasket, and shift linkage troubles are the most frequent, with oil in the lead by a couple of lengths. The proper lubricant or hydraulic fluid, specified by your car's manufacturer and made by a well-known, high-quality concern, must be added to your transmission at regular intervals. By following service recommendations available from your auto dealer, you can save much wear and tear on your pocketbook and nerves as well as your transmission.

CONVENTIONAL TRANSMISSIONS:

The now unusual hand-shift gearbox seldom breaks down, but is liable to linkage troubles similar to those that plague the automatics. Wear, bent links, a banged-up rubber engine mount, or something similar can prevent the shifting levers and yokes from working, so that you cannot shift into or out of a gear. Engine mount replacement or a simple adjustment, or both, will usually rectify this at little cost. If not promptly attended to, this minor fault may cause major damage, for a poorly functioning linkage can allow you to shift into 2 gears at once. With a horrifying crunch, the gear teeth will be stripped off like corn kernels off the cob, and you will be in for a complete overhaul. If your transmission is old and worn, or has been poorly lubricated, it may require rebuilding.

AUTOMATICS: Being of greater complexity, these are more difficult to diagnose. If yours slips badly and there is sufficient fluid, it may be due to a dirty, clogged, or stuck valve, pump screen, or governor.

Dynaflow is prone to this failing since it has several ball-check valves and pump screens which can become fouled. Buick mechanics regularly pull the transmission pan on this complaint and show it to the customer, to explain *why* the unit must be disassembled and cleaned. A useless REVERSE range and chunks of metal in the pan signify that someone has shifted into reverse while the car was moving forward, thereby stripping the teeth out of the reverse ring gear. Putting the selector lever in the PARK position when still in motion is a sure way to break all kinds of things, such as the driveshaft or transmission powershaft. Engine mounts should be checked often and replaced when necessary, to prevent range-selecting problems. **Hydra-Matic:** Owners, watch your fluid levels! Many, many a gear, clutch plate, and band replacement could have been avoided by the simple expedient of follow-

ing the service advice in the owner's manual. Oil seals, clutch plates, and torus covers, in that order, are the most replaced items. A complete disassembly is required for these operations. Skilled mechanics are the best judges of when a part should be replaced and they can show you why replacement is necessary; the shop's integrity and your alertness are the only guarantee that unwarranted work is not being advised. A leaking torus cover can often be rebushed and, if the workmanship is of high caliber, it will be quite satisfactory. Dodge, DeSoto and Chrysler owners may have any of the general troubles mentioned above, plus a few others. The pre-'54 semi-automatic transmissions in these cars have an electric system which can give all kinds of failure indications. A short in the wiring, a stuck governor switch, or a faulty kick-down interrupter switch can even affect the carburetor. Rewiring, cleaning, or replacement of the faulty items can solve these difficulties, but there is also an opportunity to sell a big job like an overhaul to an unwary customer. In this case, the job charged for needn't even be done, as washing off the housing and fixing the wiring will give the indications of an overhaul, netting a whale of a profit!

PowerFlite, Ultramatic, Fordomatic and Mercomatic, and Borg-Warner (Studebaker) units: These are subject to Hydra-Matic-like failures, and particular attention should be paid to the hydraulic fluid. Incorrect or insufficient fluid will result in overheating and considerable damage will ensue if you aren't careful. If you notice a loss of power or a ghastly stench,

stop and call a tow truck to prevent further damage. Caution must be exercised in towing or push-starting cars with automatic transmissions. The time spent in acquiring knowledge of the correct procedure will be most profitable.

EXPECT THIS FROM AN HONEST SHOP

You can quite easily determine if a shop has a sense of honor by following these steps:

Ask for, and get, permission to visit the working area so you can see the mechanics at work on your transmission;

Ask to see the parts stock, looking to make sure that genuine or name-brand items are used in replacing defective parts;

Ask to see and check the flat-rate labor book's prices, *before any work is done*.

If any one of these requests is denied, you have a right to be very suspicious, and additional investigation is in order. While these points do not exclude all possibility of dishonest tactics, they will weed most of the goats from the sheep right at the start. You probably will not be able to look directly over a mechanic's shoulder, but you should be able to watch from as close as safety permits. All garages and service departments should carry liability insurance so that they may grant you this right; steer clear of those that do not.

An honest mechanic habitually keeps defective parts from your car to show you. It's a good idea to stick around the shop long enough to make sure that they actually come out of *your* transmission, and ask for an explanation as to why they must be

replaced. You need not be an expert to recognize a broken, burnt, or worn item; you'll save money by removing temptation. Of course, a really honest mechanic won't replace such parts without consulting you any more than a doctor will remove your appendix without asking your permission.

Standard, high-quality replacements are a necessity. A great deal of experience, research, and special equipment worth millions of dollars are required to produce parts able to stand the enormous strains imposed by today's many-horse engines. Backyard-built items may be cheaper initially, but in the long run the cheapness will cost you more than standard parts would have.

Flat-rate labor books are made up by all automobile manufacturers after extensive research, to cover every imaginable repair, and will be closely followed by repairmen. *Motor's Flat Rate and Parts* and *Chilton's Motor Age Flat Rate and Service Manual* are compiled from the manufacturers' data, published each year, and used as a bible by most independent garages. Hours of labor required by a skilled mechanic to complete the average job and the list price for this labor are included. You might even ask to see bills from previous jobs similar to yours as a check that extras aren't added as a regular practice, and to get a better idea of your cost including all parts, oil, labor, etc.

If there is still some question as to the reliability of the firm, talk to a few customers as they leave, check with the local Better Business Bureau, or go elsewhere, for your own and your car's sake.

HOW TO START A STALLED CAR

Do not tow a car to start the engine. If the car has an undamaged transmission push it according to these instructions. If the transmission is damaged, or if you must exceed these limits, tow the car with the rear wheels clear of the ground or with the driveshaft removed.

AUTOMATIC TRANSMISSIONS

	Dynaflo	Fordomatic	Mercomatic	Hydra-Matic	PowerFlite	Powerglide	Studebaker	Ultramatic
PUSH-STARTING								
Ignition	ON	OFF	OFF	OFF	ON	OFF	ON	ON
Put range selector in neutral and push car to this speed (mph)	15	20	20	18c	25	20c	20a	25
Turn on ignition and quickly move lever to	DRIVE	LOW	DRIVE	DRIVE	LOW	DRIVE	DRIVE or LOW	HIGH

a Press accelerator pedal once to set automatic choke
b Switch dash control to manual shift position

TOWING

If transmission is OK,
tow car in neutral
Not faster than (mph)
Not farther than (miles)

30	40	40	30	35	30	30	30
25	3	3	1/2	100	1/2	2	20

SEMI-AUTOMATIC AND CONVENTIONAL TRANSMISSIONS

	Drivemaster	Hy-Drive	Gyromatic Prestomatic Tip-Toe Shift	Supramatic	Conventional (with or without overdrive)
PUSH-STARTING					
Turn ignition on and shift to this gear or range	HIGH	HIGH	LOW	HIGH	HIGH
With clutch disengaged and overdrive locked out, push to this speed (mph)	10b	20	10 to 15c	10	25
Then release clutch pedal and press accelerator slightly					

c Do not push farther than 1/2 mile

TOWING

If transmission is OK,
tow car in neutral
Not faster than (mph)
Not farther than (miles)

40	50	15	40	40
—	25	1/2	—	—



'56 DE SOTO ROAD TEST

... Shows why this car, 11th in sales in '55, has become an even bigger seller this model year

AN MT RESEARCH REPORT

DESOTO SALES tell a story that conforms nicely to some of our conclusions on the "Why buy a DeSoto?" question. Sympathetic critics might say that DeSoto has seemed destined to play a somewhat subdued role, often overshadowed by fast-selling Plymouths, chrome-and-color Dodges, or Chrysler power. But a turning point came in '55, when DeSoto dropped its once-venerable, now-vulnerable 6-cylinder engine, took on "Forward Look" style, a competitive power boost, and gave sales a shakeup.

Here's what happened: Plymouth went from 5th place in '54 to 4th in '55; Dodge held fast to hotly-contested 8th place, and Chrysler moved up one important slot to take over 9th place in '55. But DeSoto came up with some earned runs to move from 13th place to 11th to gain the most-improved-player award on a vastly improved team. And our '56 test car revealed why this should be another successful year.

Test car: Firelite "Sportsman" 2-door hardtop, equipped with power steering, power brakes, electric window lifts, deluxe radio, hot-water heater, special leather upholstery. PowerFlite automatic transmission is standard on all Firelites.

EASE OF DRIVING

Power-assisted or standard-steering DeSotos rate praise, particularly when the going gets rough; steering wheel fight from front-wheel movement is at a minimum. The biggest difference between the 2 steering systems is found in the number of steering wheel turns needed to move the

wheels when turning corners or in parking; mechanical systems require $5\frac{1}{2}$ turns lock-to-lock, while power steering only needs $3\frac{1}{2}$. Power-assisted turns can be made more easily and quickly, but it's difficult to move the wheels with power off even when the car is moving slowly.

DeSotos are large cars and there will be some places where the car just won't fit, even tho the upswept rear fenders serve as guides to the car's length and width and the steering is so easy. To some people, there's a drawback to this absence of effort: lack of road feel. We find early in Chrysler-product tests with power steering that you must learn to compensate for overcorrecting in turns. You have to feel your way thru tight turns a little more carefully than with other cars, for front-end wander or steering disturbances aren't transmitted to you until you're moving across the white line in a drift. On the straights you make numerous fingertip corrections for crosswinds, uneven road crowns or dips.

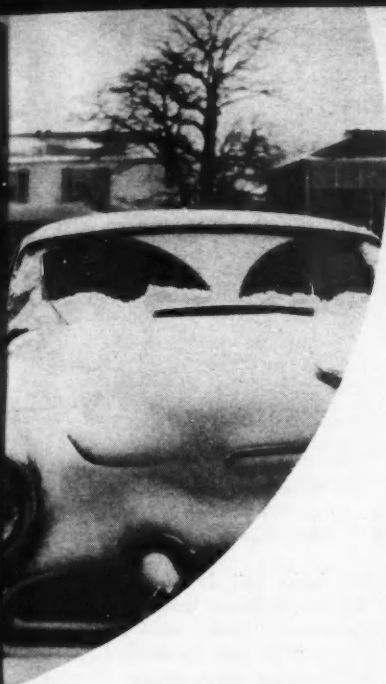
If you're tall you may have to lower your head slightly when you 1st look thru the windshield because of the combination of high seat and fairly low roofline. We didn't find much distortion at the outer edges of the windshield, tho we contend that *any* is too much to sacrifice for the sake of styling. The windshield wiper sweep was poor at the sides (see accompanying photo), while the upswept area at the center was magnified by the reduced height of the windshield.

One of the most important assets to ease of driving is a legible instrument panel.

In our estimation the DeSoto panel is near tops in esthetic appeal. The instruments themselves are possibly too delicate in that they don't telegraph their message instantly. They need better contrast between needles, numbers and background.

Glareproofing of the panel is handled efficiently by flat paint in the event you don't wish the optional padding with its definitely richer look. For trips the true map-reading light (missing from many new cars) beneath each cowl of the panel is a desirable feature. You'll find a difference in control placement dependent on whether or not the car has PowerFlite, is a Firelite or Firedome; regardless of individual placement, all are within reach.

Described after our 1st tryout as "more than just a gimmick," pushbutton shifting *can* be genuinely desirable. But it takes more than intermittent driving to fully appreciate or become used to it. You'll like some of the features incorporated into its design: Stabbing at the panel in an emergency slow-down situation during the test, we inadvertently poked a finger at the REVERSE button instead of LOW; rather than strewing pieces of PowerFlite along the road, the car simply coasted in neutral—undesirable under the circumstances, but far better than a costly transmission replacement or repair job. The gearbox had been saved by the fact that at speeds over 10 mph, reverse is blocked out automatically. Another good feature was incorporated early this year; a button now stays pushed in as long as the car is in gear. On pre-January models, touching any button



JIM LODGE

the wheels track well, the rear end stays put; even under hard driving conditions, roadability qualities offer a generous margin for error.

These qualities are a result of '55 refinements: repositioned Oriflow shock absorbers (front shocks are within the coil springs, rear shocks are sea-leg mounted), stiffer frame, rear springs some 5 inches farther apart than in '54; front tread was widened by 4 inches last year to eliminate much of the cornering mushiness and instability common to the older cars. This year, Fireflies have 6 leaves in their rear springs, Firedomes have 4; station wagon has wider front and rear tread than coupes and sedans, uses 7-leaf rear springs.

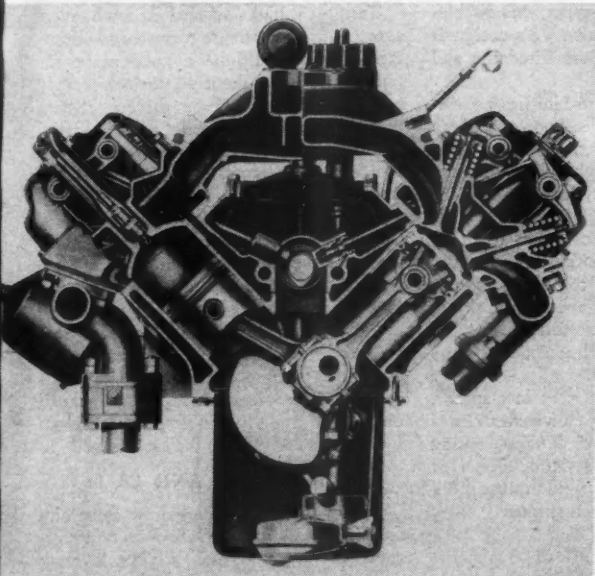
RIDE

It's possible that as many DeSotos are bought for their good ride traits as for any other factor. It's always been a comfortable, roomy car. At high speeds, the car

surprise at the general spaciousness of the coupe. Legroom is foreshortened some 3 inches compared to a 4-door sedan, but very reasonable for a coupe with the front-seat legroom (an inch greater than sedan's) offered in this car. Headroom is a mere half-inch less than in a sedan.

ACCELERATION

Added engine displacement means another model-year improvement in DeSoto passing prowess, and as in the past, it's come about without added engine noise or harsh downshift snap. Here's a brief on what DeSoto engineers have done for highway-speed passing safety in the few years this factor has been a selling point: In '53, MT's tests showed a DeSoto (with Fluid-Torque transmission) capable of going from 50 to 80 mph in 25.4 seconds; in '54 our DeSoto test car moved thru the same speeds in about 19 seconds. Last year, 50-80 times were faster again by



Cutaway view of DeSoto's 255-hp V8 shows compact arrangement of components. Single camshaft in center operates valves thru a series of hydraulic tappets, pushrods, and rocker arms. Note the efficient location of valves and air passages



COLIN CREITZ

With the aircleaner removed, Firedome's relatively minute carburetor becomes apparent. Sparkplugs are concealed beneath the stamped valve covers for protection from dirt and water. Round object at top is part of power brake system

(without pushing hard enough to put it in gear) could make all the buttons pop out, creating the possibility of the car remaining in gear without your knowing it.

An added improvement would be in nighttime lighting; at present all buttons glow with equal brightness, and a glance isn't enough to tell what gear is engaged.

ROADABILITY

With a chassis largely unchanged for '56, the DeSoto retains the feeling of unwanted front-end movement in hard cornering, but it's largely body movement, for

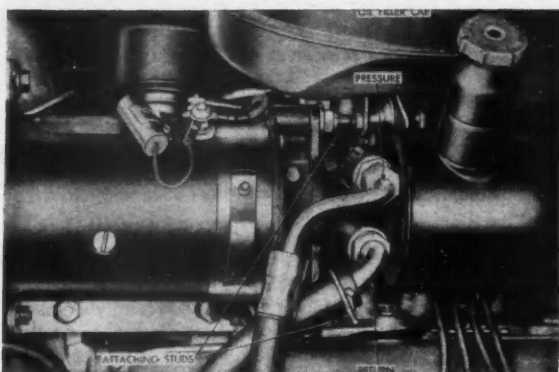
wanders very little; wind noise, with vents open or closed, is low; road noise is well controlled.

As a passenger in the front seat of the DeSoto, you have nothing to do but sit back, stretch your legs as far as you like, and relax. There is no padding on the panel in front of you, but no injury-causing accessories or obstructions, either.

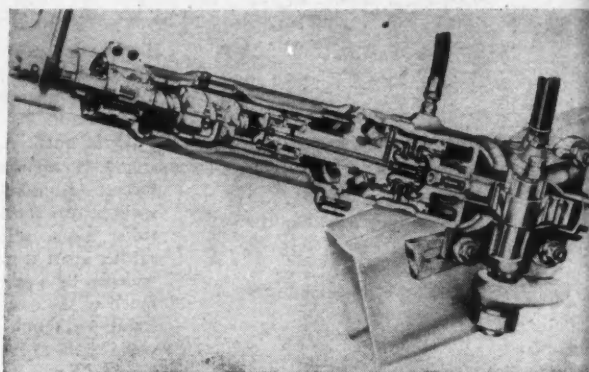
Long noted for spacious sedan dimensions, DeSoto carries its reputation to the hardtops; although hiproom is compressed to 55 inches (sedans measure 64 inches in width) our rear seat passengers expressed

nearly 5 seconds, and this year the time was cut even further.

A passing-gear kickdown (to LOW gear) was possible up to a true 50 mph in the test car; a manual shift, a la pushbutton, could be made at higher speeds, but with no gain in power, regardless of the added rpms it wrung out of the engine. At times, what felt like another kickdown was actually the 2nd pair of carburetor barrels cutting in under part-throttle vacuum drop. But this kick-in-the-pants shot of fuel mixture hitting the cylinders indicated inefficient carburetion, for the en-



Hydraulic pressure for actuating the full-time coaxial power steering unit is derived from a generator driven pump (above). A broken fan belt would naturally result in a loss of power. A hydraulic ram operates the rack and pinion gear in



the steering unit itself. An oil cushion between the steering wheel actuated valve and the ram insulates any feeling of the road from the driver. On hydraulic failure, the ram cylinder collapses and the system continues to function mechanically

gine shouldn't have been screaming for this added charge at cruising speeds. Instead of a smooth, nearly unnoticed transition from 2- to 4-barrel carburetion, we had only a lugging feeling moving up grades at 50-60 mph before the sudden cut-in. Common causes of this condition could be improper fuel mixture (too lean), sticking float valve, or maladjusted vacuum control lever. Investigation revealed that it was the latter.

Transmission changes: Standing-start acceleration benefits from a change in torque converter specifications. The stator blade angle of the impeller element (in the Fireflite's transmission only) has been altered to give what DeSoto engineers refer to as a 90-90 PowerFlite transmission. (The figure—formerly 90-80—refers to the angle at which the oil enters and leaves the turbine.) The result is a higher converter stall-torque point, a slightly higher torque multiplication factor. Now, when you hold the brake on, floor the throttle, the engine tachometer reads some 300 rpm higher than it did on a '55 Fireflite or on a '56 Firedome; letting the engine speed up a little more as you start off promotes peppier pickup from a standstill.

Transmissions in the 2 models are otherwise similar to '55, and mechanically similar to each other. A big difference, tho, is in cooling systems. Fireflite automatics are water-cooled, Firedome PowerFlites are air-cooled. (With more powerful, higher-revving engines speeding up the transmissions, an overheating problem can arise; DeSoto is playing it safe, beating trouble to the punch with this liquid cooling system. But we feel that even a Firedome in severe use should show no converter weakness, for we've found from our tests that it takes unusual punishment to produce overheated-oil conditions in PowerFlites.

Engine changes: Prime changes from last year's 200-bhp version include a compression ratio increase to 8.5 to 1 (was 7.5), and a stroking job which brought displacement up from 291 to 330.4 cubic inches.

Bore is unchanged; intake and exhaust valves are larger, intake ports are redesigned for big-engine breathing efficiency.

DeSoto's 255-horsepower V8 is one of the few hemispherical-combustion-chamber engines on our market. Costlier to produce than conventional types, this double-rocker-arm, overhead-valve V8's design is found only in the DeSoto Firedome and Chrysler New Yorker.

Ignition supplier Auto-Lite has provided what could be an added boon to DeSoto engine efficiency with the "Power Tip" sparkplug. This long-reach plug, designed basically for '56 Chrysler-product V8s (but now available for all late-model engines except L-head types), puts its firing tip further into the combustion chamber for more even, more complete mixture burning. And it's a turn-about proposition, for being in the thick of things, the plug benefits from the scouring action of the gases on exhaust strokes.

Because it burns hotter at low speeds, the plug is supposed to do a better clean-up job on carbon and oil deposits; taking advantage of the refrigerating action of rich, high-speed fuel mixtures, the plug burns cooler at wide-open throttle.

BRAKING

We'll bet that you inadvertently set your left foot on the brake pedal. It's easy to do this, whether you're just parked, or looking for a way to slow down in a hurry. Like other Chrysler Corp. suspended power brake pedals, DeSoto's is extra-wide, higher than some power pedals, but still in a good spot for pivoting from accelerator to brake on your right heel.

Altho always good stoppers, some of our DeSoto test cars have been prone to brake fade without too much provocation; thus we were anxious to find out if the new center-plane brakes (installed on both DeSotos and both Chryslers; March MT) would alleviate this condition as claimed. The new brakes are a definite improvement, coming thru our trying 12-successive-stops fade tests with good results, by comparison to the former brake system.

Uneven brake pull during or following the test was moderate; brakes returned to normal in a remarkably short time. (See table on opposite page for details.)

FUEL ECONOMY

Test car's highway and in-town averages (figures shown are corrected to odometer error) should be a good mark for tank-checkers to shoot at, for while they may seem low to some drivers, they're pretty good to those people suffering from gasbillitis. Looking at the steady-speed fuel economy figures, comparative standards showing the car's capabilities, you'll see a commendable showing, considering the engine displacement increase. Economy increase notwithstanding, you may go farther on a tankful in a '56, for the gas tank is a gallon larger!

All tests were run using Mobilgas Special, for premium-grade gas is recommended in the Fireflite engine; Firedomes, according to DeSoto sources, can be operated on regular-grade gas, if proper timing adjustment is made when the car is tuned.

GETTING IN AND OUT

Last year's doorhandles drew complaint from MT (and many DeSoto owners) because they offered such a poor leverage device for gripping the handle. The handle was integral with a pushbutton; when the thumb-sized button was pushed, the handle popped out. The cries were heard, for this year there's a convenient button-and-handle setup that can't be criticized.

When getting into our DeSoto hardtop test car we didn't come close to the wrap-around section of the door jamb, tho we unconsciously ducked beneath the one-inch-lower roofline. Holding open the heavier door of 2-doors becomes a problem only to rear-seat passengers who have to slip between the seatback and rear door frame to settle into the roomy back seat. There's a noticeable difference between the DeSoto's dimensions and those of the "popular priced" hardtops. Our test car carried optional seatbelts, but there were no rear-floor (continued on page 51)

P E R F O R M A N C E

'56

(255-bhp engine)

ACCELERATION From Standing Start
0-30 mph 4.0 0-60 mph 10.9
Quarter-mile 17.8 and 78.5 mph
Passing Speeds
30-50 mph 3.9 50-80 mph 11.2

FUEL CONSUMPTION Used Mobilgas Special
Stop-and-Go Driving
12.8 mpg highway trip average
11.1 mpg city driving average
13.8 mpg over measured course
12.6 mpg tank average for 580 miles
Steady Speeds
19.6 mpg @ 30 17.8 mpg @ 45
15.3 mpg @ 60 12.5 mpg @ 75

STOPPING DISTANCE 145 feet from 60 mph

BRAKE FADE Slight on 4th stop from 60
Complete after 9th stop
Complete recovery 3 minutes

TOP SPEED Fastest run 111.4 Slowest 106.2
Average of 4 runs 108.7

SPEEDOMETER ERROR Read 33 at true 30, 49 at 45
66 at 60, and 82 at 75

'55

(200-bhp engine)

ACCELERATION From Standing Start
0-30 mph 4.3 0-60 mph 12.8
Quarter-mile 19.2 and 76 mph
Passing Speeds
30-50 mph 4.9 50-80 mph 14.3

FUEL CONSUMPTION Used Mobilgas Regular
Stop-and-Go Driving
12.4 mpg over measured course
12.2 mpg tank average for 613 miles
Steady Speeds
19.7 mpg @ 30 18.2 mpg @ 45
15.7 mpg @ 60 11.9 mpg @ 75

STOPPING DISTANCE 146 feet from 60 mph

TOP SPEED Fastest run 106 Slowest 101.1
Average of 4 runs 103.2

SPEEDOMETER ERROR Read 32 at true 30, 48 at 45
63 at 60, and 79 at 75

S P E C I F I C A T I O N S

ENGINE: Ohv V8. Bore 3.72 in. Stroke 3.80 in. Stroke/bore ratio 1.02:1. Compression ratio 8.5:1. Displacement 330.4 cu. in. Advertised bhp 255 @ 4400 rpm. Bhp per cu. in. 0.771. Piston travel @ max. bhp 2786 ft. per min. Max. bmep 159.7 psi. Max. torque 350 lbs.-ft. @ 3200 rpm.

TRANSMISSION: Standard transmission is PowerFlite, 3-element torque converter using planetary gears. Overdrive transmission not available on Fireflite models.

REAR-AXLE RATIOS: PowerFlite 3.54.

STEERING: Number of turns lock to lock 3½ (power steering).

WEIGHT: Test car weight (with gas, oil, and water) 4397. Test car weight/bhp ratio 17.2:1.

TIRES: 7.60 x 15 tubeless.

PRICES: (Including suggested retail price at main factory, federal tax, and delivery and handling charges, but not freight.) FIREHOME 4-door sedan \$2632, 2-door hardtops \$2688 and \$2809, 4-door hardtops \$2787 and \$2908, convertible \$3036, 4-door station wagon \$3325.

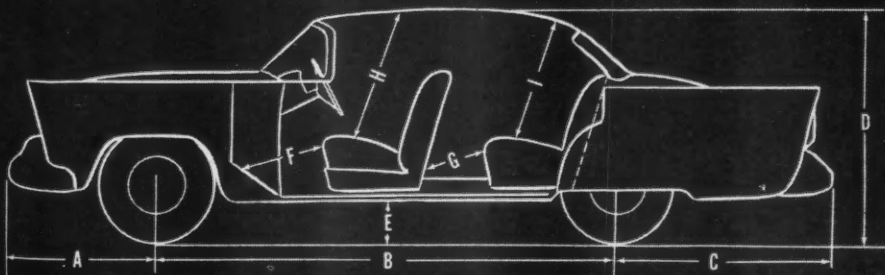
FIREFLITE 4-door sedan \$3074, 2-door hardtop \$3301, 4-door hardtop \$3386, convertibles \$3499 and \$3570. **ADVENTURER** 2-door hardtop \$3683.

ACCESSORIES: PowerFlite standard equipment, power brakes \$40, power steering \$97, power windows \$102, 4-way power seat \$70, radios \$98 and \$119, heaters \$82 and \$129, air conditioning \$427 and \$567.

DIMENSIONS

A FRONT OVERHANG 36.8
B WHEELBASE 126
C REAR OVERHANG 55.3
D OVERALL HEIGHT 62.7 (60.6 loaded)
E MINIMUM GROUND CLEARANCE 6.2 (at frame sidemember)
F FRONT LEGROOM 45.7
G REAR LEGROOM 44.7

H FRONT HEADROOM 35.1
I REAR HEADROOM 34.5
J OVERALL LENGTH 217.9
K OVERALL WIDTH 70.3
L FRONT SHOULDER ROOM 50.4
M REAR SHOULDER ROOM 50.4
N TRUNK CAPACITY N/A

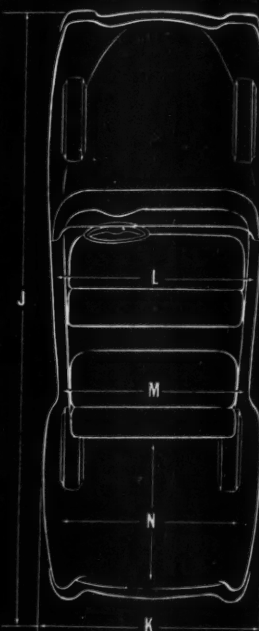


MT ROAD TEST



'56 DE SOTO

Fireflite 2-door hardtop with PowerFlite





by Al Kidd Sports Editor

Sebring Will Sizzle . . .

THE NATION'S No. 1 sports car event is only days away at presstime but for weeks the enthusiastic eyes of auto racing have been angled in the direction of Florida's Sebring circuit. Here's why:

Just as they do in any event, be it sales or auto racing, Chevrolet is going all out to win at Sebring. It's hard to say just how many Corvettes will be entered but Chevy found out on the stock car tracks last year that there's safety in numbers, so figure on a fair-sized entourage. Most of them will be the special competition Corvettes with a hotter engine, improved brakes, magnesium knock-off wheels, full underpan, D-Jag-like headrest and tail fin, plastic tonneau cover, and racing windshields. No definite word on Chevy drivers as we go to press but there's been talk of John Fitch and don't forget that Chevrolet regularly employs Mauri Rose, Zora Arkus-Duntov and, in a recent switch from Dodge,

Betty Skelton. After showing off its 150-mph potential at Daytona Beach, the Corvette is raring to go. Things have been much quieter at the Ford camp and the T-Birds may or may not be flying at Sebring.

But what's big news to the competition-starved American factories is a matter of course to the Europeans. Without making any particular fuss about it Jaguar, Ferrari, Aston-Martin, Austin-Healey, OSCA, Maserati, Lotus, Porsche, Cooper, and Arnolt-Bristol have been preparing their own Sebring entries.

The matter of professionalism caused more than its share of news in connection with the event. As soon as prize money was announced for Sebring, people like Bob Sweikert (D Jaguar) and Troy Ruttman (Ferrari) began to get interested and the purity-minded SCCA began to get worried. But after a lot of discussion and not a little bickering, SCCA decided that its members could compete along with the pros as long as they maintained their amateur status, i.e., all sport and no cash.

Sebring could also be the 1st appearance for a new racing stable being formed in this country by wealthy California sportsman Tony Parravano. He hopes to wind up with a team that will compete in international competition with both sports and grand prix cars. It's still too early to say just who will be on the new team but Masten Gregory, Johnnie Parsons, Jim Bryan, and Pat O'Connor have all been turning fast laps on the Willow Springs course in Parravano cars.

Torrey Pines, a Turning Point . . .

Jerry Austin and Sherwood Johnston drove their D Jaguar (No. 36) to 1st place in the last Torrey Pines 6-Hour Road Race, Jan. 14-15; our photo shows the fast D coming into the straightaway for the finish flag, and cornering as well as or better than anyone could wish. Just over 2 laps behind were Jack McAfee and Jean Kunstle in a pair of Porsche Spyders, demonstrating to all concerned that some sort of new classes must be formed to

give owner-drivers a chance at a trophy. In the under 1500 cc production race, 7 of the 1st 10 finishers were Porsches; in the under 1500 cc modified race, all the Porsches finished, and in the 1st 6 places. Whereof the "little man" in racing? Ah yes, rallies, mud-trials, hillclimbs, and like that.

New SCCA Officers . . .

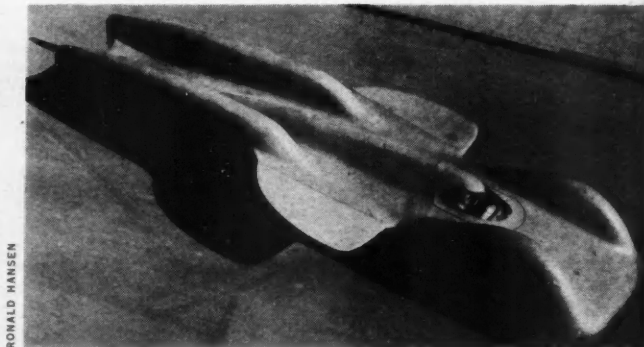
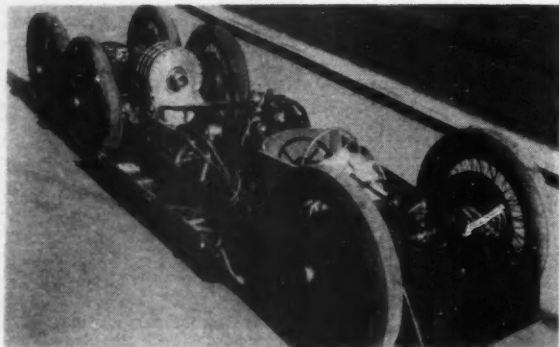
The most important feature of January's SCCA meeting in Detroit was the election of new national officers. Final results pointed to a very competition-minded SCCA for '56. Jim Kimberly was elected president, Bill Lloyd vice president, James Lowe secretary, Fred Stratton treasurer, and Ben Harris director of publications. Later the appointment to chairmanship of the all-important contest board went to auto enthusiast (and Indianapolis car owner) Ed Walsh.

The Kiekhaefer Team . . .

Carl Kiekhaefer, whose stock cars won both NASCAR and AAA late-model stock championships in '55, has apparently decided to put all of his eggs in the NASCAR basket for '56. His star driver in AAA circles, Frank Mundy, has re-established himself in NASCAR by posting a \$1000 bond. Also on the Kiekhaefer team are Tim and Fonty Flock, Al "Speedy" Thompson, and Buck Baker. Reports say that Kiekhaefer will run both Chrysler 300-Bs and Dodge 500s. Chances are the Mercury Outboard crew will go after both NASCAR Grand National and National Convertible titles this year with Mundy likely to compete in the latter. The new team got off to a flying start in the Phoenix, Ariz., 150-mile Grand National race when Baker, Mundy and Tim Flock swept 1st, 2nd and 3rd places, all on Chrysler 300s.

Dragging Dodge . . .

The recently announced Dodge 500 wasted no time in showing its mettle on the California drag strips. Tony Vattoria rocketed the Dodge to a new San Fernando strip record by turning the quarter-mile at 83.29 mph.

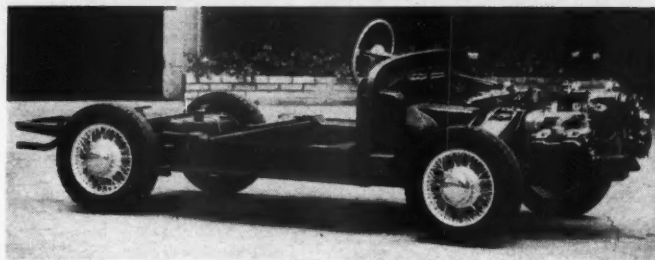


RONALD HANSEN

IN 1938, Daimler-Benz began to plan an assault on the World Land Speed record, held for years by British machines. Utilizing the genius of Professor Ferdinand Porsche, they started work on a vehicle capable of 370 mph or more. At once they ran into trouble: Hitler objected. Mercedes was planning on a Bonneville run but Hitler built them a 6-

mile-long, 100-foot-wide addition to the Dessau autobahn. Porsche then calculated that with a zero safety factor, 370 mph would be the maximum speed possible on the course, though he had hoped to attain speeds of 400 to 430 with his creation, the "T-80." A V-16 engine of the type used in the Heinkel He-III and the Hindenberg Zeppelin was decided on

as the powerplant, with modifications of course. Located just in front of the twin rear axles, the engine was to be cooled with ethylene-glycol, had an 8 to 1 compression ratio and fuel injection. Developing a maximum 3030 bhp at 3000 rpm, the "T-80" was halted in its tracks by World War II and rests at Stuttgart. —R. Hansen and F. Kirbus



COURTESY THE HENRY FORD MUSEUM

A new sports car, the Gregoire, is outstanding for its most unusual features. The frame structure is one piece of cast aluminum, is claimed to be extremely rigid, and allows for mounting a variety of body types. Front wheel drive, with power provided by a 130-hp, 134-cubic-inch, flat 4-cylinder engine, gives tremendous traction, particularly in view of the 2 to 1 (front to rear) weight distribution. Variable rate suspension adjusts for differences in load so as to provide the best possible handling characteristics at all times. The pleasantly styled body by Henri Chapron seats 3 side by side, and also gives commodious baggage space both in the trunk and behind the seats. Production plans are unknown at presstime; this car is listed as a prototype

USAC Branches Out . . .

In addition to the proposed race at Monza, Italy (see March MT), USAC has its fingers in at least 2 other potentially interesting championship-car pies. The vague Toronto race mentioned last month is coming closer to reality in the form of a notation on the new USAC calendar which reads: "Monday, July 2, 500-mile championship race, Toronto, Canada, 2½-mile paved track." More interesting still is another date on the USAC calendar that may settle the old argument of whether or not a championship car can do anything but turn left. Taking a cue from NASCAR, USAC has set November 25th aside for a 250-mile race on the 2½-mile road course at Willow Springs, Calif. We go along with the enthusiast who said, "I don't know where all this is leading but I want to be around when it gets there."

Grand Prix Notes . . .

Juan Fangio easily reached the 1st plateau on his climb to a 3rd consecutive world championship by winning the Argentine Grand Prix for Ferrari at a record speed of 79.4 mph. Maserati settled for 2nd and 3rd places, thanks to Jean Behra and Mike Hawthorn. Earlier in the month Stirling Moss urged a Maserati with a bad fuel leak to a win over Ferrari in the non-championship Grand Prix of New Zealand. Moss also won the sports car event with a Porsche Spyder.

Like the recently announced Indianapolis specifications, it appears that the international formula will stand pat. Reports say that formula I will remain at 2.5 liters unblown and 1.5 liters blown at least thru 1958. And, as in the U.S., there is at least some talk in Europe that only gasoline will be allowed as fuel. . . . Of interest, too, is the fact that an American will be No. 1 driver for a British factory team in '56 GP events—watch Harry Schell on the Vanwall. . . . A change in Italian personnel moves famed team manager Ugolini from Ferrari to rival Maserati. . . . And, finally, after extensive safety modifications at each location, both Le Mans and Rheims have French Government O.K. for their scheduled '56 races.

United We Stand . . .

For years the powers representing the 3 major phases of auto racing in this country—grand

prix type, stocks, and sports cars—have fluctuated between mild cooperation and outright hostility. But now whispers about a truly all-American organization to represent the best interests of auto racing as a whole are beginning to circulate. The aficionados (but not yet the head men) have been talking about an FIA-like body that would be the auto racing authority of the country. The 3 organizations from which this group would most likely be elected are NASCAR, USAC, and SCCA; these groups in turn would set the standards for their particular form of racing. The possibilities are myriad; among them more careful planning of racing events, a recognized status for amateurs and professionals, im-

what's
coming up?

march

- 19-22, Mobilgas Economy Run, Los Angeles to Colorado Springs, Colo.
- 24, General Motors Motorama, San Francisco
- 24, F.I.A. Grand Prix of Endurance, Sebring, Fla.

april

- 15, Targa Florio, Sicily
- 19-29, General Motors Motorama, Boston
- 21-22, SCCA Race, Pebble Beach, Calif.
- 21-May 2, International Motor Show, Turin, Italy
- 28-29, Mille Miglia, Italy
- 28-May 6, International Automobile Show, New York Coliseum

may

- 13, Monaco Grand Prix, Monte Carlo
- 19-20-26-27, Qualifications for Indianapolis 500, Indianapolis, Ind.
- 30, USAC 500-Mile Memorial Day Race, Indianapolis, Ind.

june

- 3, Grand Prix of Belgium, Spa
- 10, USAC 100-Mile Champ Race, Milwaukee, Wis.
- 16-17, SCCA Hillclimb, Mt. Equinox, Vt.
- 17, Grand Prix of Holland, Zandvoort
- 23-24, SCCA Road America Race, Elkhart Lake, Wis.
- 24, USAC 100-Mile Champ Race, Langhorne, Pa.

proved insurance possibilities, more say-so in international events, and, most important of all, one strong spokesman for the sport. Such an organization would call for concessions by each group but it could mean nothing but a giant step in the right direction.

The 500 . . .

As always pre-race Indianapolis talk is steeped in both realism and rumor. One rascalish rumor goes as far as saying that Britisher Stirling Moss will be teamed with Pat Flaherty on the John Zink entry. Other entries, these official, show Andy Linden on the Chapman Roadster, Pat O'Connor on the Anstead Spl., Roger Ward on Ed Walsh's car, and Duke Dinsmore in the Shannon Brothers newly acquired (from Anstead) car. Veteran Fred Agabashian and Rookie Bob Veith will team on the 2-car Federal Engineering entry. And, contrary reports have been filed on the new Bardahl Ferrari. All of them name Giuseppe Farina as the driver but some say that the Ferrari will be the only car in the race with carburetors (3 of them) while others insist that it will follow the trend to fuel injection. According to form there's at least one out-of-this-world engine being prepared for the 500. And, as usual, there isn't much available information about it. But Joe Lencki of Chicago, long-time race driver and engine builder, has developed what presumably is a fairly conventional piston engine that has turned up 416 horsepower at 6200 rpm (he says he could wind it up tighter for about 750 horses). An engine of this type has reportedly been sold for \$10,000 and Lencki predicts that it will push a car to lap speeds in excess of 150 mph and a race average of 145, all of this mainly due to outstanding acceleration coming out of turns.

Economy Run to USAC . . .

At the same time that it bowed out of auto racing as such, the AAA announced that it would continue to sanction some automotive trials and record attempts. Biggest plum in the trials category is the Mobilgas Economy Run, which has been AAA sanctioned in the past. But, with nature taking its course, signs of the times change, and this year the Economy Run will be under USAC Sanction. Longer than ever before, the Run will go from Los Angeles to Colorado Springs, Colo., will take 4 days.

EVER SINCE CHARLES DARWIN knocked the world for a proverbial loop in 1854 A.D. by expostulating his beliefs on the evolution of the species, poor Homo Sapiens has been in a terrible dilemma trying to figure out whether or not his antecedents were monkeys—or just looked like them—and/or what in the world he is going to look like in the year 150,000 A.D. Most of his thoughts, no doubt, as he looks over his gangling being with all its varied appendages, bumps, crevices, and apertures, have been directed to which ones will disappear and which ones will grow more formidable. The suspense is killing! Will we have big heads full of brains, no stomach, and little feet—or monstrous gams, with protuberant navels and just enough head to look halfway human?

Well, my friends, you do not have to worry any longer, because the trend is clear in my mind, and I fully expect (all famous people get to write in the 1st person eventually) to be considered the Twentieth Century Darwin for my revelations. Actually the whole thing is rather simple and took only a slightly evolved brain to work it out (the great, you see, are also modest).

The trend of what is to come began when a rather seedy-looking young Englishman with a pioneer spirit trundled out a little MG and braved the hoots and honks of the larger inhabitants of a rather uncivilized thoroughfare known as Park Avenue West. As a helmet he wore a beret and was armed with blackened briar and pigskin hand covering for the occasion. He did not (and I want this for the record) have a plaid tonneau cover—yet. This outrage, which was to be so epoch-making, was still only an outrage at this time, and as always happens when one's finer sensibilities are shocked to the point of utter confusion and ire, someone says something. It is also a truism that when someone says something it always gives someone else the excuse to say something more, and from this time on the little car (and the seedy Englishman) became the topic of discussion—sometimes heated (usually a Lincoln owner) and sometimes reverent (a future Jaguar owner). And it was at this precise moment that the race of Homo Sapiens lost its homogeneity. The species is now undeniably divided, and their progress on the evolutionary scale is just as clear as can be.

We know that thru natural selection of mates we determine through the mixture of dominant and recessive genes (don't squirm, Dr. Mendel) our future appearance, behavior, and so on. Now, it is conceivable that we will run up against the problem of mutation, at which time something unexplainable occurs and a descendant becomes something he shouldn't be, such as a man with 2 heads, Siamese twins, or in our present division of the species it is actually possible that the daughter of a Ferrari driver might elope with a man in a Chevy. However, the species usually run true to form and such divergences will be in the definite minority.

Our 2 new species have different names. There is Homo Hotrodeus (H.H.) and Homo Detroitensis (H.D.). There are certain characteristics which will remain true to both types due to mutual precursors. It is anticipated that within a very short time the eyes of both H.H. and H.D. types will have migrated in manner similar to the halibut. The right eye will be higher in the forehead and will have a definite elevated strabismus (squint, to you). This is for constant vigilance through the rear-view mirror. This eye will be especially sensitive to red lights and men in blue uniforms. In like manner, the ears of both species will be large and will be able to pick up the purr of an official Harley-Davidson (Hog, to you) 6 blocks away.

Here the likeness ceases. It is predicted that in about the year 2469 A.D., extra arm buds will be developed on H.H.'s right and left sides. These extra arms are necessary for handling 4 to 8 speeds forward (and 3 in reverse!) and for waving to other members of the same species as they go whizzing by. The noses of both species will get more and more elevated to show their superiority; however, it is anticipated that the degree of elevation of the nares (nostrils, to



BY JONATHAN CLAVER

*... Will the
primeval ooze of today's
expressways spawn the species
Homo Hotrodeus and
Homo Detroitensis?*

you) will depend on the heights of the windshields of the H.H.s, because persistent drafts whistling thru the sinuses are being considered as a possible means of extinction of the species—to say nothing of being somewhat uncomfortable, especially to today's lower evolutionary forms.

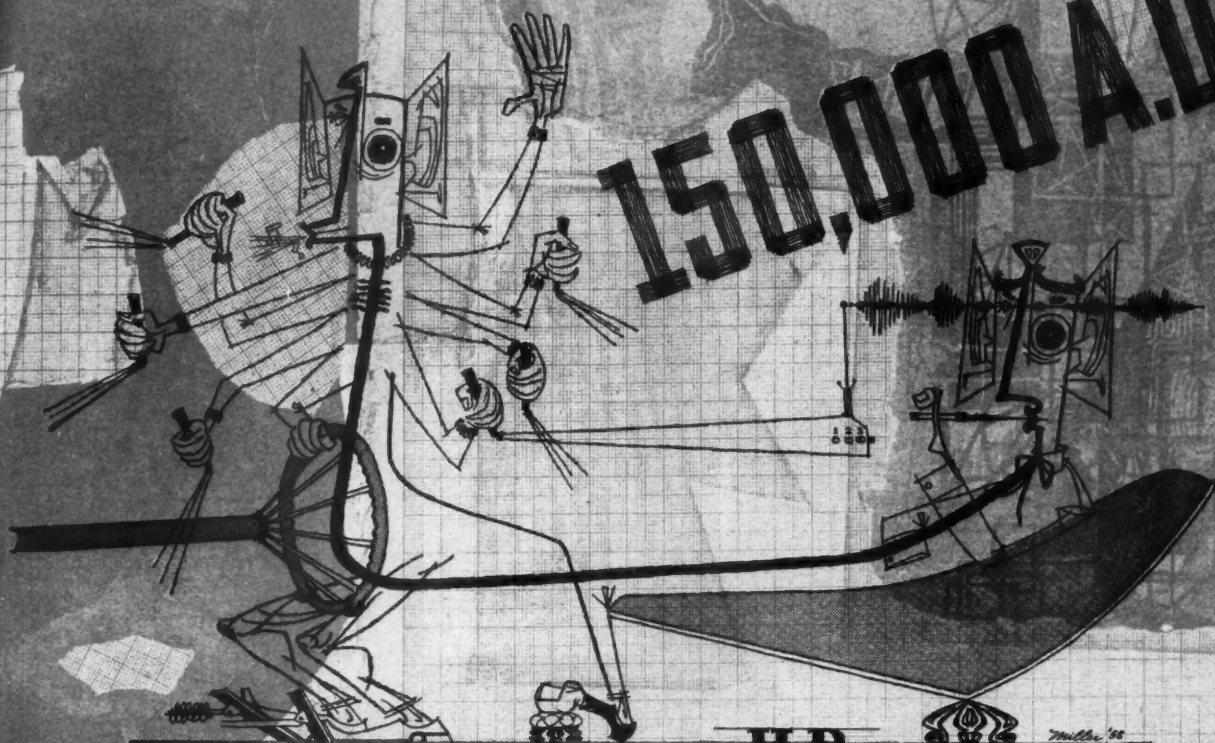
Obviously, hair will be a distinct blot on the heritage of the H.H., and when it does appear will be handled by the leaders of the species thusly:

1. Shave it off (a butch won't do)
2. Wear a flesh-colored beret
3. Skin graft the whole scalp with the soft hairless palm of a young maiden
4. Excommunicate the heretic and buy him a Hudson

While the arm buds of the H.H.s are growing, the arms of the H.D.s are becoming atrophied (withered, to you). A Buick owner, for instance, who by chance happened to have a right arm with all that super-duper colossal Dynaflo and nothing to shift would definitely be a social outcast. A slightly withered left arm with one finger is permissible. It is useful for flicking cigarette ashes, operating electric pushbutton windows and occasionally over-steering the new ultra-dynamic power steering which operates by brain wave impulses.

The nether parts (rump, to you) will probably be the most differential part of the anatomies of both species for the simple fact that the H.D.s won't have any—with all that soft upholstery, comfy springs, etc., what in the world could they use it for—what indeed! The H.H.s, however, will become more padded—not wider (bucket seats, you know) but a lot deeper and springier.

The digestive systems of the H.H.s will be considerably

H.H.**150,000 A.D.****H.D.**

Miller '55

stronger than the H.D.s. This will come about because it has to be hardened to seeing more bleeding fellow H.H.s splattered about the highways, and of course "he just eats and sleeps automobiles." That is tough on anyone's digestion.

Now we come to the legs and their appendages. The H.D.s obviously need nary a muscle. In fact, one single leg will be considered fashionable in 2490 A.D. with one large big toe to gently depress the new improved cushioned power brakes. If, however, a left leg should appear on the child of a Packard owner the family can always have a non-electronic light dimmer installed on the left side and prevent this child from becoming socially unacceptable.

The legs on the H.H.s, however, are very powerful and narrow. Narrow enough to depress the brake without disengaging the clutch and racing the engine all at the same time. They will also be permanently bent at the knee. A dimple on the anterior thighs in which to rest the steering wheel will be extremely fashionable and attractive to fellow H.H.s.

Then there are, unfortunately, the misfits. These can be found among all species. In the year 3265 A.D., this mestizo (I am borrowing the word from an official in the Carrera Mexicana, XXXLLVI) will have no species name; in fact, he won't even be talked about except occasionally in damning whispers. This is the poor unfortunate individual who crossed up his genes by buying a Cadillac and an MG (and in all probability he paid cash for both, an unheard-of thing even as early as 1956). This poor lost soul may have anything from a callus on the shoulder to 4 mismatched arms. His nose may even turn down. His heart is literally in his mouth. (It is more convenient to have it built this way permanently and not just

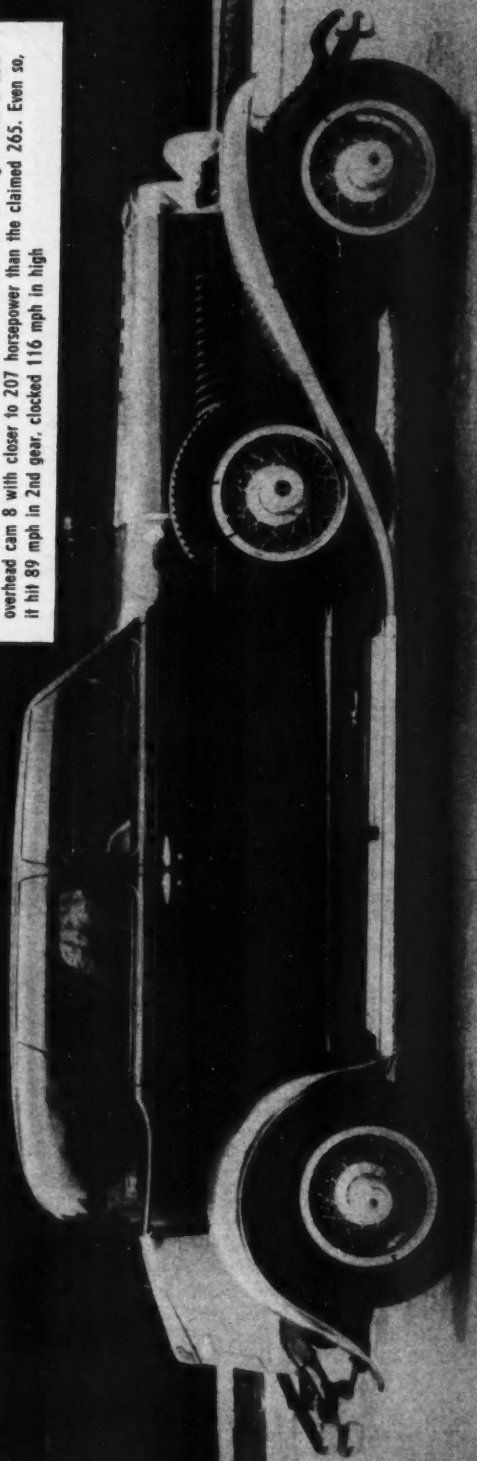
to have it happen when one changes cars—that becomes uncomfortable.) His legs may be long and thin or a mixture of fat and no muscles. It would be extremely unlikely for him to have a dimple on his thigh to rest his steering wheel. And his bottom! This is shameful. There may be none on one side and an extended rubberlike one on the other, calling for great ingenuity and maneuvering while attempting to sit. This man is a mess.

Then there will come the day in about 3288 A.D. when these naturally conflicting species will come to blows. After years of tension, intrigue, and the like; after the H.D. diplomats have condescended to consider disc brakes, de Dion rear ends and trailing links, and after H.H. ambassadors have given in, albeit reluctantly, to the fact that luggage space is important, some minor emotional incident will touch off a war. This is what I can conceive happening. An H.H. and an H.D. are stopped simultaneously for holding up traffic by a cop on the Hollywood Freeway, which is now considered an alley. The cop insists that H.H. is only going 158.5 mph (at 10,000 rpm) and that H.D. is only going 162.2 mph (at 21,000 rpm), and thereby obstructing traffic. This is too much of an insult, as H.H. knows he was doing 284 mph at 7000 rpm, and H.D. just knows he was doing 192 at 19,000 rpm. This minor incident lights the fuse, and all over the land civil strife develops. At the Battles of Torrey Pines and Watkins Glen can be heard the supersonic fight songs of the H.D.s played through electronic chrome-plated air horns as they are locked in combat. And, seemingly unabashed amid the tumult, the H.H.s counter with one of their own—an aboriginal chant developed in the dark ages of TV—It's a Foooooord!

Duesenberg



With so much legend surrounding Duesenberg, it's sometimes difficult to separate wheat from chaff. What is fact and not fiction is that it was American, with chassis and engines only built by brothers Fred and August Duesenberg for up to \$11,500. All bodies were custom built (for \$3,500 and more), as in the case of the convertible victoria by Rolliston (above) and "saloon" by Murphy with 4 doors cut into top (below). Monstrous (420-cubic-inch) SJ engine was a dual overhead cam 8 with closer to 207 horsepower than the claimed 265. Even so, it hit 89 mph in 2nd gear, clocked 116 mph in high



CLASSIC Comments

by Robert J. Gottlieb
Classic Car Editor

MANY TIMES in the past we have discussed the appeal classics hold for various enthusiasts. Briefly, those with artistic inclinations enjoy body designs and appearance. Enthusiasts in this category have widely divergent views in establishing various models as classics because opinions of beauty vary. More definite in common opinions are those attracted to classics because of mechanical design, construction, and craftsmanship. Close study and inspection of one car with another easily provides a basis for comparison.

Many enthusiasts are prone to define as classic any automobile with body constructed by a specialized body builder such as LeBaron, Brunn, or Bohman and Schwartz. There are those who feel that any phaeton with custom body automatically qualifies. The true mechanical or scientific enthusiast often disagrees. It is difficult for the average enthusiast to understand a view which includes as a classic a 1935 Packard with body by Body Builder "A," but which excludes as classic a 1935 Packard with the same style body, but built by Body Builder "B."

Some custom body builders were first artists, and then business men. Others were first business men and then artists. Yet others combined both fields with sound engineering principles. As a result there are many beautiful custom bodies now falling apart at the seams. Other cars are homely in appearance but constructed like a tank. Fortunately most builders achieved a happy balance of good design, construction and engineering principles that has been of lasting value.

Let's be specific! As business firms, the companies had to decide what traffic would bear for a given body on a given chassis. Not all classics were in the \$15,000 to \$20,000 class. Many were priced at only a few hundred dollars above the cost of the average automobile. There was, therefore, great opportunity to build products well worth the sales price, as well as to build bodies not justified by sales price.

It is easy to point to a car that is well constructed of superior material. No ripples appear on body surfaces. The finest upholstery was used and construction detail was organized so that body was built to last, yet components were easily accessible when repair was necessary. Consider, now, other cars with custom bodies which miserably fail to meet the requirements set forth in the definition of a classic. Some body builders used inferior metal when compared with the metal used by other contemporary builders. There was a complete disregard for servicing problems as well as repairs. In many, appearance was

so important that there was a complete disregard for passenger comfort or safety. We have noted in prior issues automobiles which were built without provision for spare tires, glove compartments, ashtrays, cowl ventilators, and many other items which were generally built into automobiles. These defects are readily apparent to the eye, but other defects of great magnitude become apparent only when an owner attempts to restore or repair the car. Many builders used wooden frames to support doors and body panels. They were often constructed in such a manner that metal repair is almost an impossibility without tedious wood removal and reconstruction. Others placed components in such a way that repair could not be effected without unnecessary disassembly. As an example, it was necessary to remove gasoline tanks on some cars to either straighten body metal or service chassis components. The greatest offenders were those custom body builders who saved time and money in mounting door hinges on wooden supports. Constant vibration and use caused support screws to become loose, with resultant sagging doors. Many cars, poorly constructed, have no support whatever for the door hinges, except the wood. Owners of these cars must completely rebuild wooden sub-assemblies. Other body builders devised as a means of door supports interlocking metal channels. Tightening bolts (a matter of a few minutes), solves sagging door problems for these owners.

There are many many other illustrations that could be used. Due to construction a repair job on one automobile might amount to an hour's work, while the same job on another car necessitates either many hours of tedious work or complete reconstruction.

Many club secretaries have failed to forward the names of new club officers, together with changes in addresses. We were recently advised of the formation of the Kissel Kar Klub, an informal association of owners of Kissels. The present address is 20 Chestnut St., Boston 8.

We are also advised that the Classic Auto Restoration Society ("CARS") has changed its address to P.O. Box 2847, Hollywood Station, Los Angeles 28. If Club dues are kept at the present \$2 per year, this organization should soon become the largest of its type in the country. The Club answers restoration problems of their members by means of a monthly newsletter.

Ben Reese, Hayward, Calif., asks me to list all models of Cords and Auburns that are really "true blue classics of an unquestioned nature," together with the sales price of each car and model. I'm afraid I can't run fast enough to comply with this request. Many Cords and Auburns are classics, but many are not. Many others are borderline classics, while others which are considered non-classics today might be considered classic in the future. As to price, any car is worth more to a man who wants that car than it is to a man who doesn't want it. Prices are therefore variable. Eliminating considerations of condition, a car very often has more than one price. If you feel you really want the car, and you can afford to spend the money, then it's up to you to make the decision as to whether or not the particular mechanical or styling features are worthy of your attention.



FAILURE-PROOF IGNITION

*Wanta Start
Sumpin'?*

Be sure you have a D S M

Yes, be sure you have a D S M to insure an easy engine start, a good idle and top performance through all ranges.

The economies D S M provides are important too, as they return your investment over and over again.

Many drivers write us regarding the extra life they have experienced in Spark Plugs, Batteries, Starters and even Engine Life due to the efficient engine performance provided by D S M installation.

So when you "Wanta Start Sumpin," be it car, truck, marine or stationary engine be sure you have a D S M, universal for all gasoline engines.

AVAILABLE IN 6 VOLT OR 12 VOLT

Free literature upon request

**ENJOY THE LUXURY OF
COMPLETE D S M IGNITION
COILS—CONDENSERS—DUAL POINTS
Precision made and backed by DSM**

**DSM ELECTRIC
COMPANY**

6209 Hamilton, Detroit 2, Michigan
Jobber Inquiries invited

THE ASTOUNDING year-end accident totals have at last turned into action the nation's conviction that something must be done to make our highways safer. Our federal government and our local and state governments, in most instances, are "looking closely" at the possibilities. But will they turn their efforts to "driver education" and slogans again as they have done in the past, or will they do something to eliminate what is probably the principal cause of contemporary motor accidents—the element of surprise?

The air transportation industry, being more at the mercy of the elements, takes great pains to acquaint its pilots with air highway conditions *in advance*. This is precisely what is needed in road transportation, especially—as strange as it seems—on our super highways, our parkways and turnpikes. Perhaps the future will bring highway radio service; but since that is not feasible at this moment—and the need is vital at this moment—another warning method will have to be devised.

On our lesser roads, the twisting and turning, the ups and downs, are expected, if not actually known in advance, and in changing weather, rational drivers proceed cautiously without being constantly reminded or warned. But on our new broad and straight highways, we are lulled into being unwary by the "super" qualities of the roadways. That complacency is the trap. For illustration, let me tell you about a recent "drive" I took

over one of the nation's most famous and best-known turnpikes.

Two days before Christmas, I met a friend in Harrisburg, and we set out for Pittsburgh on the Pennsylvania Turnpike, a highway which was once the model for modern highways, and which was referred to at the time of its completion as "The Dream Highway." It is indeed a marvel of construction engineering with its tunnels, bridges, gradual hills and curves and straightaways, but it offers a good example of the hazards such highways present because of the marked changes in driving conditions that occur from one side of the mountain ranges to another, and because of the deceptive driving ease on its long straight stretches. Also, its facilities afford a ready means of eliminating a good measure of the surprise element. Our journey over this super-highway should have been a simple, steady drive, albeit a cautious one, from one city to another, but before we reached Pittsburgh the usually pleasant 5-hour drive had turned into an 8-hour nightmare.

A light snow which had fallen the night before was in the process of wearing off the highway when we turned onto it just out of Harrisburg, but it had been ashed and the trucks were still out spreading ashes. Shortly, however, unashed stretches of highway began to alternate with ashed portions and things grew a little tense. We saw cars speeding out of the ashed areas to slip and slide about precariously before they could continue on their way, and we took warning. In this section, we saw only one minor mishap. We could still chuckle at the ugly monsters the modern 2-toned automobiles had become under a covering of ashes which spread like a mangy cowl over the grille and back along the sides. At least they were some reassurance that up ahead slippery surfaces had been tended to.

Before we reached the 1st of the turnpike's 7 tunnels, not 50 miles out of Harrisburg, both the snow and the ashes disappeared and we were able for the 1st time, and the last, to make

the speed limit. Then we went thru 2 tunnels, and horror began.

Mist, gathering and thickening in the valleys as we proceeded westward, offered some warning of trouble ahead. The air turned considerably colder, and the sky seemed to have dropped right down on the mountain tops. A fine spray of rain began to fall, covered everything, and under the updrafts on the hills, instantly froze. We paid close heed to our 1st threat—a slight slip on a downhill curve—and slowed to a near crawl.

In between the slippery hills, straight dry distances tempted motorists to pick up speed, to make time while they could. A few of them did speed up, and we saw their cars later on sitting by the roadside, their fenders rumped and crushed, in pairs and in groups of 3 or 4.

The real horror appeared in the stream of oncoming traffic, which was taking the worst hills in a downhill direction and was obviously unprepared for them. Drivers came at full speed over the crest of those hills and, too late, discovered the ice—or another automobile twisting and turning sideways in front of them, blocking the road.

At one point, we saw a new model car appear far ahead at the top of a long hill, saw it jerk, saw it suddenly streak downward and head toward the dividing island, toward our lane of traffic. Had it bounced over that island, we could not have avoided a crashing tangle of wreckage. But just as it struck it skidded sideways, hit the island with its back wheels and went

twisting and turning toward the guard rails opposite. It hit the road shoulder and leaped into the air, end over end, and settled on its side behind the guard rail, off the roadway. Just beyond it, the hillside dropped sharply away in a 20-foot incline.

The car following, which was far enough behind to avoid collision, made an attempt to stop to offer aid, went into a spin, and brought about a jam-up that left all of us gasping who had stopped on the uphill side. One after the other, unsuspecting motorists came zipping over the top of the hill and crashed into that

growing obstruction in the middle of the roadway. When we were finally ordered to move on, there must have been 15 to 20

cars mixed up there. That appalling scramble happened because that was the 1st ice as they headed eastward that day, and they were unprepared. They had no way of knowing what lay ahead of them over those hills. *They were flying blind.*

A simple warning system *on the highway*, more urgent than road signs, not dependent on radio reception, and commanding attention, would eliminate the surprise element. Rectangular warning lights (to prevent confusion with round traffic signal lights) placed at regular intervals would notify motorists of driving conditions on the next section of road, whether or not they stop for information:

Green—All clear
Yellow—Changing to hazardous
Red—Hazardous
Yellow and Red (flashing)—Dangerous; traffic obstructed

Keys to the significance of the signals could be printed on the toll card presented each motorist, or posted at regular intervals along the highway, or both. A nationally standard system of this type would demand respect and observance. The average driver doesn't need slogans and threats as much as he needs help. Something like this must be done . . . and soon!



by Sherman Martin

TESTED 3 YEARS ON 3,000 PASSENGER CARS AND TRUCKS—CADMUS AFTERBURNING SUPERCHARGER INCREASES HORSEPOWER 20% . . . COSTS . . .

A revolutionary aeronautical development now made practical
for the internal combustion engine

INCREASES HORSEPOWER FOUR WAYS!

1. Feeds back a measured high charge of exhaust pressure into carburetor—duplicating blower potency without normal power drain.
2. Preheats and increases vaporization for more efficient combustion.
3. Injects unburned (wasted) fuel from exhaust manifold.
4. Injection jets create vortex action for more efficient distribution of vapor.

These four positive advantages are exclusive in the new Cadmus Afterburning Supercharger

THE UNIT CONSISTS OF:

A completely self contained insert which is mounted with gaskets (included) directly below carburetor as shown. The unit is machined and vented to inject eccentric streams of exhaust gases, causing vortex and supercharging action. All fittings are included: the unit itself, corrosion proof tubing in proper length and standard threaded fittings for both exhaust manifold and carburetor ends. The same bolts now holding your carburetor are long enough to accommodate the unit. All you (or your garage mechanic) do is tap the exhaust manifold (1/2 x 27). The entire Cadmus Afterburning Supercharger is shipped to you complete in one package.

DEALERS AND DISTRIBUTORS

The Cadmus Afterburning Supercharger is now in production and is available for shipment to your territory. Write for information. NOW AVAILABLE FOR ALL CARS.

GUARANTEE

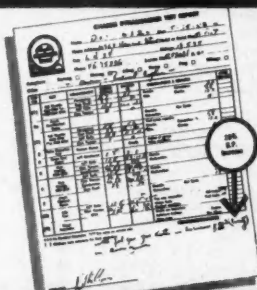
I certify that the Cadmus Afterburning Supercharger will add 2 1/2 miles per gallon of gas consumed to any car now getting over 17 miles per gallon. (And proportionate increase in all other cars and gasoline burning trucks and buses.) Money refunded upon return of supercharger within thirty days from time of purchase (if performance does not equal or exceed the increases stated).

John F. Kennedy
PRESIDENT

Guaranteed to add 2 1/2 more miles per gallon to any car now getting over 17 miles per gallon.



RACE DRIVERS: Greatly reduces warm-up time. Increases top speed on any car, stock or modified.



Cadmus Industries

5880 Hollywood Blvd., Los Angeles 28, Calif.

Gentlemen: Please ship me postpaid one Cadmus Afterburning Supercharger.

make of car _____ year _____ model _____

I enclose \$6.95 (check, cash or m.o.)

For C.O.D. send \$3.00 deposit

Name _____

Address _____

City _____ Zone _____ State _____

(California residents add 3% state tax)

LOOK

MOTOR TREND

on sale April 12

MAY

... TO THE MAY ISSUE OF MOTOR TREND FOR A STARTLING ANNOUNCEMENT!

ONE of the manufacturers of American production cars will be presented with an award for making the most significant advancement on a U.S. production car!

Read HOW and WHY MOTOR TREND magazine made this selection!

Read WHO gets the first annual MOTOR TREND AWARD!

at all newsstands!

*special introductory
offer to new readers of
Motor Trend
magazine . . .*



six big issues of Motor Trend for one dollar!

Reserve your grandstand seat now for the exciting news of the automotive world, past, present and future, and what it means to you.

Your monthly copies of Motor Trend will bring you up to date on new developments, car production facts, new products, road test analysis, written by the experts.

Get the full color, excitement and drama of the motoring world and what's most important, the knowledge that will make the owning of a car more enjoyable.

Order today
with the
coupon below
and save one-third
the regular cost
on this helpful,
car owners'
magazine!



6

big issues for one dollar offer

MOTOR TREND magazine
5959 Hollywood Blvd., Los Angeles 28, Calif.

Please send me six monthly issues of Motor Trend Magazine at your special introductory rate of one dollar.
Enclosed: ☐ cash ☐ check ☐ money order

name.....

address.....

city.....zone.....state.....

NOTE: If you prefer to keep your copies of MT intact for filing purposes you may simply send your name and address on a card along with a dollar and your subscription will be entered immediately.

continued from page 11

Spotlight on Detroit

at the start of your car's "run" on the date scheduled. And the entire staggering order is sent to the plant control tower for the big day.

D-DAY, H-HOUR. Accounting Department has been notified that the car is being built. A notice goes to the traffic department, to tell them where your car is headed, how it's to get there. And we're still wondering how your black-and-white Belvedere is going to avoid the red and green fenders and wheels circling overhead. "Fire control," or the assembly line control tower, takes care of this problem. Using fascinating Tel-Autograph Telescriber machines, the control tower broadcasts the items listed on the "track sheet," a master sheet with order data on all the cars starting thru this "run." This tells the assembly line what car gets a radio or white sidewall tires. The 37 machines transmit handwritten messages instantaneously to receivers a few feet away or miles apart, claim many advantages over verbal instruction systems. Messages are received only by those stations selected, whether anyone is in attendance or not; written messages are not likely to be misunderstood, responsibility is fixed by identified sender, and the transcribed data is a matter of permanent record.

THE WHEEL STATION, for instance, receives an "Electronic Longhand" message specifying the wheels and tires to be placed on the conveyor for each pre-identified car; engine-mounting station gets a report which lets them double-check their continuity on the converging lines. Because this run was scheduled days ago, all the specifics (bodies, chassis, drive train and engines) were started on the timed conveyor racks at the proper time; thus the entire day's production of some 3500-or-more cars is synchronized. Constant back-checking, double checking and final checking all but eliminates mechanical or human error. A breakdown, of course, stops all the lines at once; there's no piling-up, no elusive red-car-with-green-fenders.

WHO WON THE 5th AT PIMLICO is about the only information not contained in the all-important track sheet, basis of all tickets on the car. Code figures have been sent to the end of the production line to check "cars received" against the track sheet's "cars ordered," a final assurance that the car is assembled according to your order. After checking the tickets, any minor adjustments are made on a repair line, and the car is ready for shipment to the distributor and subsequent delivery to you.

DAILY INVENTORY is a staggering prospect in any business—but here, this monstrous chore is a simple by-product of assembly. As an electronic wizard

checks off cars finished, it can not only make up a bill, but can also tell its operators in just a few minutes what stage any single car in a day's production is going thru at that time!

YOU HAVEN'T GOT YOUR CAR

YET, but it won't be long. A message to the transportation section said that 4 of today's cars go to the same area in the country. But the cars were literally miles apart in assembly. At the parking lot, a driver notes from the windshield stickers that a car is scheduled to go by rail, takes it to that section of the lot. Until all 4 cars are ready (each was on a different shipping order, from different dealers in that area), the rail car load waits.

BEHIND THIS OVERWHELMING PRODUCTION is a key time-saving process: Predictions of how many cars can be built in the forthcoming month. This is a Plymouth sales department function which tells production personnel to prepare to turn out a certain number of units.

HOW DOES IT WORK OUT? "Fairly close," says Clyde Light, assistant to Bill Bird. When it isn't so close, the estimate for the next period is adjusted. One month, for instance, management's calculations (it's more than just a guess) were high on club sedans, too low on 4-door sedans; this was corrected in next month's production, balanced out well. Electronic brains have helped cut some phases of planning time to 30 days from what was normally a 3-month proposition.

YOU KNOW WHAT ELECTRONICS

MEANS to you; a car delivered in 1/2 the time it would have taken back in 1946—a time when hurry-up orders were the vogue; it means ready availability of a car suited to your every whim and fancy in color and option. To the manufacturer, it means being able to cater to the greatest number of prospective new-car buyers in our history. Every U.S. car maker is faced with the order-produce-and-deliver-game, and many of the production processes described here are common rules to all automotive contestants. Getting cars built and delivered is nearly as competitive as selling them. That's why Plymouth, 1st in the industry to use the IBM 650 machine in this capacity, is proud of its program—a system developed over a 9-year period.

SUMMING UP THE SYSTEM, Plymouth "sales engineers" tell us that without the electronic brains integrated with the human element of production, "We just couldn't produce the number of cars we do." Production figures are often cold and meaningless. But look at it this way: As you read this, about 30 "custom-built" cars rolled off Plymouth's assembly line, ready for delivery.

—Jim Lodge



Bendix ELECTRIC FUEL PUMP

For the very few who really want perfect performance!

The average American car owner demands satisfactory performance from his car. With a modern American car, he's likely to get it with standard equipment. He is not a very likely prospect for a Bendix* Electric Fuel Pump. But the owner who insists that his engine deliver every last ounce of power

that was built into it is the fellow the Bendix Electric Fuel Pump was designed for. If you're one of those car owners who never stop striving for perfect engine performance, you need a Bendix Electric Fuel Pump. Once you've tried it, you'll never operate a car without it. (Write for illustrated folder.)

*REG. U. S. PAT. OFF.

Sold in Canada by Bendix-Eclipse, Ltd., Windsor, Ont., Canada

ECLIPSE MACHINE DIVISION ELMIRA N. Y.



Sale! MOTOR TREND READERS PREVIEW! "READ THIS AD—IT WILL COST YOU NOT TO"

Each year we have an inventory sale—here it is—Since we have cash—C.O.D. or lay-away plans—you can make those savings NOW! DON'T MISS A LINE—MAYBE YOUR BUDDY'S NEED IS LISTED ALSO.

Please order by item number—Give all data on your car with validation deposit per below:

- CHEV-OHV-8 ADAPTOR—allows '55-56 Chev-V8 installation into '32-48 Ford '39-50 Merc. ONLY \$37.50. For '49 & up models \$27.50.
- OLDS-CAD ADAPTOR—fits '49-54 Cad-'49-55 Olds OHV's to early Ford-Mercs \$22.50 LATE \$48.75. (Includes pilot bearing adaptors and installation instructions.)
- MODEL A-B-C FORD 4 cyl. adjustable tappets—\$7.95 set. 3/4 acceleration cams \$17.95, FULL \$28.95 matched metal timing gear sets \$5.95 chopped-balanced flywheels \$15.50
- QUAD CARB manifold for '32-53 Fords-Mercs—NEW factory 2nds—guaranteed 1st line performance and looks—ONLY \$19.50
- WHEEL SPACERS—ALLOWS use of '40 and later Ford steel disc wheels on A-35 Ford hubs without wobbling—cracking—send \$2.50 for 2 or \$4.00 for 4—Send amount in full—mailed prepaid.
- '49-53 Ford and '51-53 Merc motors into '32-48 Ford-Merc chassis. Adaptor ONLY \$9.50—same 8RT part at Ford \$18.50
- CAD-OLDS '49 OHV & up—standard clutch & flywheels—for conversions 9 1/2"-10" or 11" specify \$27.50. Aluminum 1316-hard faced for all cars—clutches \$34.95
- BALL BEARING, positive throttle eliminates slippage and slop in carburetion linkage—one required at each point of movement ea. 35c
- USED '32-53 Ford-Merc F.H. cams 3/4, Fulls, Supers—originally cost to \$60.00 NOW—\$12-25.00. Write your model and NEED!
- USED '32-53 Ford-Merc F.H. Heads - Manifolds - Distributors—excellent savings—WRITE YOUR NEEDS - PLANS—WE'LL ANSWER.
- MODEL A-B-C Fined hi-compression WEIAND HEADS \$24.50
- HYDRAULIC SPACER KIT—allows '39 & up Ford brake installation on "A"-35 Spindles \$3.50 postpaid. CUSTOM STEERING ARM—where '35 up spindles are used on earlier chassis. Reg. type \$4.95 -3 hole adjustable - reinforced \$11.00

HOW TO ORDER ★ Send for our complete listings with our OPS form—how to order data OR send approx. 50% deposit. We'll ship C.O.D. Balance, anywhere, best carrier.

SHELL SPEED & MUFFLER SHOPS
Ph. GR 7-8283
Open 7-5, closed Sun., Holidays.
References: Dun & Bradstreet
11726 MT-8, Wilshire Blvd., West Los Angeles 25, Calif.

DON'T MISS . . .

May
June
**WATER
WORLD**

**DEVIL
OF THE
LAGOON!**

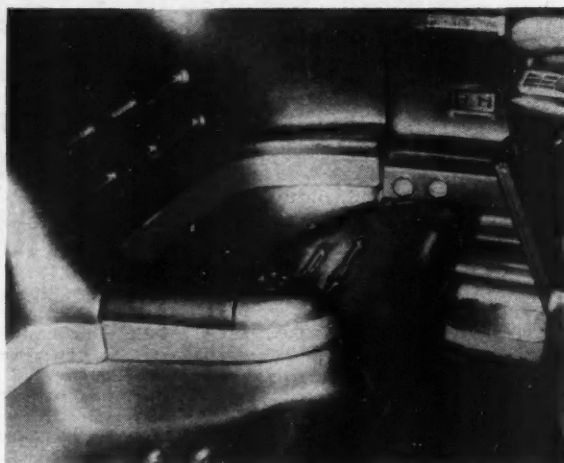
**"PIRACY
under
THE HIGH SEAS"**
by
E. R. CROSS

**LATEST
THRILL
SPORT . . .
"OUTBOARD
ARCHERY"**

**HOW
TO
*
glass your boat!**

FOR "excitement"
& "adventure"
WATER WORLD
on sale
APRIL 12th

X-RAYING THE FIREBIRD II continued from page 31



INTERIOR AND CONTROLS

Firebird II is designed for closed-window operation at all times, and therefore depends on integral heat and air-conditioning. Should the forced-draft cooling system break down, the only way to keep from steaming is to open a small air scoop on top of the windshield. We note that in all pictures of the car in operation (taken on the Arizona desert), this scoop is open.

Air passing over the evaporator comes thru the fanlike scoops on the cowl, with the evaporator performing the double function of cooling the interior and providing refrigeration for a working juice bar (option of coke, orangeade, and root beer) under the dash. Fan-circulated air to cool the condenser in the rear never reaches the passenger compartment, entering via the negative or zero pressure openings in the front of each gas tank and leaving thru openings in the underbody.

The workaday plastic test car has instrumentation like any other turbine car. The show car is dummied up for electronic control, but GM's technicians can relax until the advent of the necessary control towers along the nation's highways.

The left television-like screen is for internal information, such as turbine rpm and oil temperature at starting time. When the "Range" button is pushed, it gives you your kerosene supply in terms of miles to go. "Monitor" is a scanning system for engine conditions while cruising.

The single number visible in the center is really a clock, leaving the right screen for external information, courtesy of the control tower. In the movie at least, the tower operator can project on your screen anything from a map locating your position to an interior view of a motel which he recommends for the night.

The top half of the mirror-like object in front of the driver picks up the view witnessed by the television camera peeking out the rear window. The lower half projects your speed. The 3 buttons are transmission controls, which may be a key to GM's thinking on location of pushbuttons. The autopilot controls, of course, have to do with hands-off operation.

Aside from a vacuum-operated puffer to light your cigarette and the usual buttons for heat and cold, the next most interesting part of the driver's compartment is the movable (pedals and all) floorboard. The theory is that moving the boards back and forth rather than the seat keeps the eyepoint at exactly the right level; a good idea but probably one that is pretty expensive for production.

All seats are pushbutton, including reclining backs and headrests. Tables pop down from the armrests for previously mentioned purposes of pinocle playing. The domelight is spotted

up towards a luminescent headliner, only one small facet of the attention paid to interior lighting; when the doors are opened, red warning lights in their trailing edges guard against a side-swipe.

A central hydraulic system, utilizing a special pump built by Saginaw, supplies high-pressure oil (850-1000 psi) to the power steering, air-oil suspension units, brake boost, and windshield wipers. Pressure is stored by 2 accumulators so that the system can be used for a while when the turbine is inoperative. Actually, a unit like this could be applied to production vehicles, because the pump works no harder than current power steering units; instead, it utilizes waste power (steering need be powered only about 2 per cent of the time) for other purposes.

Electric units are powered by a 3-phase, alternating-current generator operating thru a silicon rectifier. Output is controlled by a transistor-equipped voltage regulator.

There is no way to estimate the actual cost of the plastic test car, metal show car, the separate and complete show chassis, as well as the several body and interior mockups or buks used in the construction stages. Titanium, in experimental quantities, costs \$20 per pound. The car weighs about 5300 pounds, but you can't use this measuring stick. The talent of stylists Harley Earl and Bob McLean, chassis designer Joe Bidwell, turbine engineers Bill Turunen and John Collman, and numerous others from the participating divisions created the Firebird; these efforts can't be priced.

Basic Dimensions

Wheelbase.....	120"	Ground Clearance.....	5.5"
Overall Length.....	234.7"	Overall Width.....	70.6"
Front Tread.....	60"	Overall Height.....	52.75"
Rear Tread.....	57"	Cowl Height to Ground.....	36.75"
Tires—Special Section—27.3" overall diameter		Headroom.....	35.2"

Engine and Chassis

Design.....Gas Turbine with Regenerator
Turbine Wheels.....Single Stage Axial
Flow Type
Gasifier Turbine Speed.....35,000 R.P.M.
Power Turbine Speed.....28,000 R.P.M.
Engine Horsepower.....200 at 35,000
R.P.M. Gasifier Turbine Speed
Maximum Gas Temperature.....1650° F.
Compressor.....Single Stage Centrifugal
Type
Compressor Pressure Ratio.....3.5 to 1
Turbine Bucket Material.....GMR-235
High Temperature Alloy

Fuel.....Gasoline, Kerosene or Fuel Oil
Transmission.....4-Speed Planetary Gear
and Fluid Coupling with
Integral Differential
Brakes.....All Metal Turbo-X Disc Type
Front Suspension.....Double Wishbone
Rear Suspension.....Independent—
Diagonal Swing Arms
Springing.....Delco-Matic Air-Oil Type
Electrical System.....12-volt Alternating
Current Type with Rectifier and
Transistor Voltage Regulator
Central Hydraulic Supply Pressure.....
850-1000 Pounds Per Square Inch

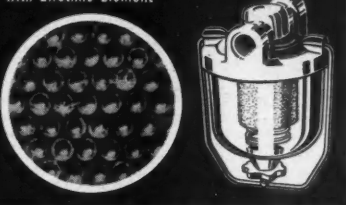


New Products MAIL MART



IT'S EASY TO ORDER BY MAIL. Simply send the coupon below . . . you'll get fast service and clean new merchandise. SATISFACTION GUARANTEED or your money cheerfully refunded.

Perma-Bronze Fuel Filter with Lifetime Element



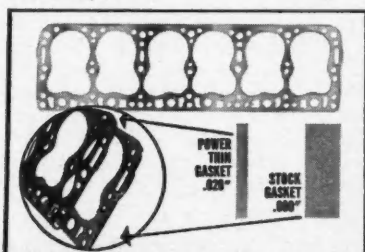
PERMITS ONLY CLEAN FUEL to reach your engine. Porous bronze filter screens out all gums, tars and foreign particles . . . strips out condensation. Gas vaporizes more completely . . . you get extra miles per gallon . . . more power and pick-up. Easy to install on any car. Lasts forever. Only \$2.95. Item 1. Ppd.



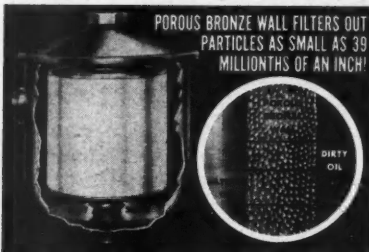
RADIATOR PROTECTOR "sacrifices" its active element to clean engine cooling systems and keep them clean. Magnesium-copper disc neutralizer removes rust and scale that solvents and flushing can't touch. Eliminates "hot spots" and overheating. STOPS electrolytic action that causes costly damage. Fits all cars. \$1.95. Item 2. Ppd.



WORLD'S FINEST SPARK PLUGS by Lodge of England. Have solid platinum electrodes, wide heat range. Can't corrode or burn out . . . outlasts the average car. Original equipment in Rolls Royce! Gold-soldered inner seals, diamond-ground seats. Fit all cars (we ship correct model). Good economy—last "forever." \$3.75 each. Item 3. Ppd.



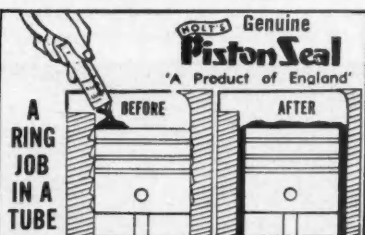
POWER-THIN extra soft Copper Gaskets . . . easy, economical way to increase compression up to 17%. Boosts engine HP for better mileage and acceleration. Same as milling down cylinder head .060". Guaranteed not to blow out. 4 and 6-cyl. cars \$4.95; 1932-53 Ford V-8 and Mercury, \$6.45 pr.; all other V-8's, \$7.95 pair. All straight 8's, \$7.95. Item 4. Ppd.



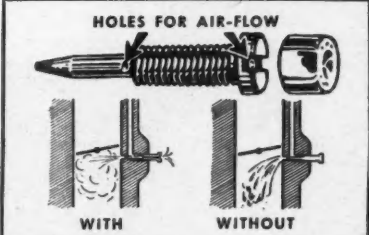
PERMA-BRONZE OIL FILTER for uniform filtration . . . greater oil mileage. Fits standard filter case . . . ends expense of replacement cartridges forever. Easy to clean. Acid neutralizer included. 10-year guarantee. "By-pass" element \$4.95; Giant "Full-flow" element \$8.95; Complete filter with case and "By-pass" element \$10.95. Item 5. Ppd.



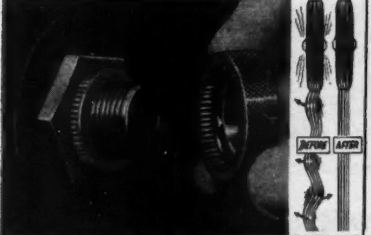
FIGHT ENGINE WEAR two ways. Neutra-Plug's active magnesium element neutralizes corrosive engine acids . . . powerful Alnico magnet captures abrasive metal particles. Replaces stock crankcase drain plug. Standard model \$1.95. Deluxe model (double-size floating element on 200 lb. test cable) \$2.45. Item 6. Ppd.



NEW "ZIP," NEW POWER for sluggish, worn engines . . . without the cost of an overhaul. Easy to use. Just unscrew spark plugs, squeeze Holt's into holes. Engine heat forms self-expanding seal that boosts compression, reduces piston slap and cuts oil consumption. Lasts up to 10,000 miles. Insured by Lloyd's of London. \$4.95. Item 7. Ppd.



GANE AIR-JET NEEDLE gives 2 to 4 (or more) extra miles per gal. of gas. Assures proper gas-air mixture. Stops raw gas from pouring into carburetor . . . gives smoother idle. Patented Filter Cap keeps dirt out. Installs in 30 sec. Try for 10 days—money back if not 100% satisfied. State make of carburetor (8-cyl. cars take 2). \$1.50 ea. Item 8. Ppd.



STOP WHEEL WOBBLE! Micro-Lok Spindle Nuts hold front wheels perfectly in line. 10 times more accurate than ordinary spindle nuts. That means TIRES GO STRAIGHT . . . get up to 6,000 miles extra wear. Saves brakes and bearings, too. Increases steering safety. Made of tough, hardened steel. \$2.95 per car. Item 9. Ppd.

FREE GIANT NEW CATALOG!



Contains thousands of special auto parts—many not yet in stores. Sent free with order for any item above. (Otherwise, send 25¢ for postage, handling.) Get yours today. SPECIAL BONUS! Valuable Power Calculator sent free with each order.

DEALERS! Help meet demand in your area for Hi-Performance equipment. Write on your letterhead for new wholesale catalog—just off the press!



5805 E. Beverly Blvd., Dept. 516, Los Angeles 22, Calif. Phone RAymond 3-3671

Gentlemen: Please rush me the items circled at right:

My car is _____ Year _____ Model _____ No. Cyl. _____
Name _____
Address _____
City _____ Zone _____ State _____

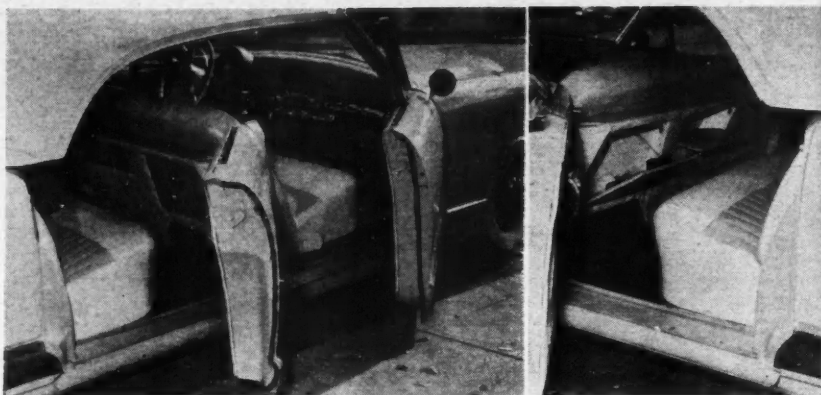
1 2 3 4 5 6 7 8 9

\$ _____ Full Price Enclosed.

\$ _____ 20% Deposit. Send C.O.D.

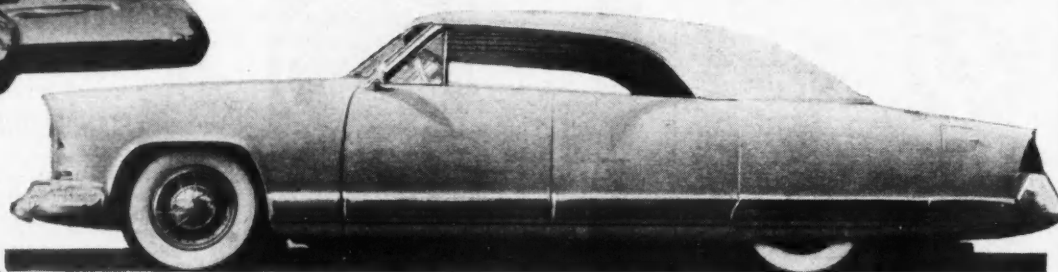
ORDER BY MAIL TODAY! Satisfaction guaranteed or money back! Send currency, check or money order and we pay postage anywhere in the world on items marked Ppd.; others f.o.b. Los Angeles. 20% deposit required on C.O.D.'s (No C.O.D. outside U.S.A.) California residents add 3% Tax. Phone orders accepted.

Johnny Bignone's custom bears little semblance to a stock '51 Kaiser 4-door sedan, but a little ingenuity and Fiberglas did the trick. The very low padded top required removal of the doorposts, necessitating a brace thru the back of the seat to recover the strength lost. The interior has been redone in pink and white naugahyde



the beauty lingers on

Let the imprisoned glory escape—Browning



PHOTOS BY OLLY OLIVAS

The festoons of chromium which disfigure many cars are absent here, tho the original side plates have been retained to achieve that long, low look. The padded fabric top doesn't convert but gives that appearance



Hooded '53 Lincoln tail lights set off the Kaiser bumpers. Hoods were formed of Fiberglas over a cardboard template, trimmed for best appearance, then installed

Airscoops were formed in the same manner; parking lights are located under the stock grille bar

DeSoto Road Test

belt-attachment plates to trip us up or take up valuable floor space as in most installations. In the DeSoto, the belts loop around a special seat-frame bar; the bar is then connected thru the floorboard to a frame crossmember via steel cable running unseen beneath the rear floor mat.

HOW WELL IT'S CONSTRUCTED

Looking the test car over carefully, we found some common ailments—orange-peel marring the paint, misaligned inner windshield molding and doorsills. We found no traces of equally-common body-joint file marks or misfitted upholstery. No water leaks thru doors or windows; no moisture in huge trunk even after snow had piled up on decklid for 3 days. Chrome-pitting may soon be a thing of the past; DeSoto makes extensive use of aluminum in grille, uses anodizing method to give Adventurer gold trim. We encountered no troubles whatsoever during the test. Transmission operated smoothly and quietly, drive train had no whines or vibrations. Engine condition normal at all times; cold-morning warmup time was about par for the big V8 course.

SERVICING

Mechanics have had plenty of experience with this Chrysler-based V8, should effect efficient repairs when necessary. If there's anything unusual about repairs, maintenance or longevity, MT usually learns about it. DeSotos, on this basis, are apparently giving reliable service, for we've heard nothing to the contrary.

OTHER OPTIONS

DeSoto buyers can get 2 air conditioners (recirculating and fresh-air types), a gas-oline-fired, extra-hot heater, a "Highway Hi-Fi" record player, even a \$39, 15-jewel, self-winding watch mounted in the steering wheel hub. Bodies come in 14 solids, about 84 2-tones, with multi-colored interiors fashioned in nylon-faced brocade material, all-vinyl or all-leather upholstery.

PowerFlite and overdrive transmissions are extra-cost in the Firedome series, cost \$179 and \$107, respectively; dealers have a not-too-wide range of interchangeable axle ratios, but enough to meet most normal driving needs. Our test car was equipped with the standard 3.54 ratio, satisfactory for economy-acceleration requirements during the test.

OTHER MODELS

Don't let anyone refer to the less-expensive DeSoto Firedome as the "small" DeSoto. Inch-for-inch, its body and engine are every bit as big as the Firelite. Powerwise, it mounts a 2-barrel carburetor instead of a 4-barrel model, has a milder camshaft, puts out 25 less horsepower. Appearance-wise it's easily mistaken for a

Firelite, for it differs only in headlight rim styling, lack of fender-top chrome, top quarter-panel trim, and in fender name-plate script. Firedome interiors are less fancy, but tasteful.

Latest model option is the Adventurer (see March MT), a special gold-hued 2-door hardtop with a 320-horsepower engine. Power isn't its only distinction; its chassis is stiffer for safety and durability.

Counting both series, there are a pair of 4-door sedans, 4 2-door hardtops, and 3 4-door hardtops, 3 convertibles (Firedome, Firelite and specially trimmed "Pace Car" model), and, in the Firedome series only, a handsome station wagon.

SUMMING UP

Stylish, colorful, lively, up-to-date in every selling respect. That sounds basically like a pretty good outline for marketing in any price class, and sounds familiarly like the new DeSoto. Intensive advertising, spotlighted ventures like pacing the '56 Indianapolis "500," and introduction of "specials" like the Adventurer keep De Soto in the public's mind more than ever before.

Some models call for a good-sized down payment, but keep in mind that there's a spread in price, from the Firedome sedan to the deluxe Adventurer, of over \$1000.

—Jim Lodge

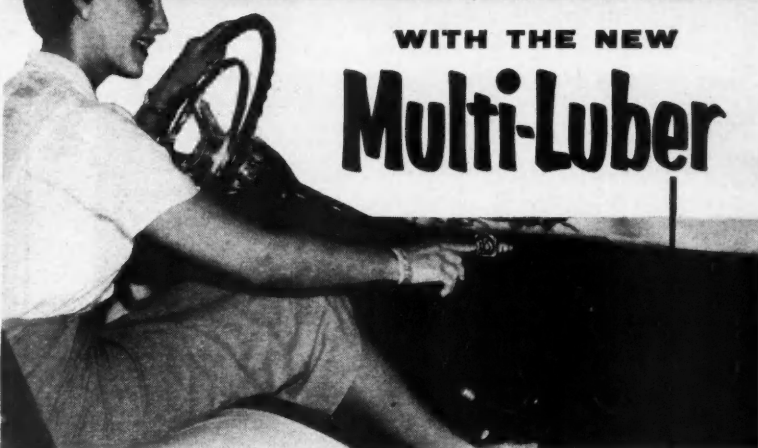
NOW

AUTOMATIC POWER LUBRICATION

FOR YOUR CAR

WITH THE NEW

Multi-Luber



If you own a late model Ford or Chevrolet, this is for you. With a mere press of a button on your dash, all chassis points are high pressure lubricated in seconds . . . guarantees that smooth "Just Lubricated" ride every day . . . provides wonderful, time-saving convenience . . . adds years of economical car operation. The Multi-Luber has been exhaustively tested and is available on current models of one of the largest car manufacturers.

Buy it installed from your car dealer, garage, or service station—or install it yourself. Kit includes complete instructions for quick and easy installation.



**LINCOLN ENGINEERING
COMPANY, ST. LOUIS 20, MO.**

Please send me your illustrated leaflet describing MULTI-LUBER, and the name and address of my nearest Multi-Luber Dealer.

NAME.....

STREET.....

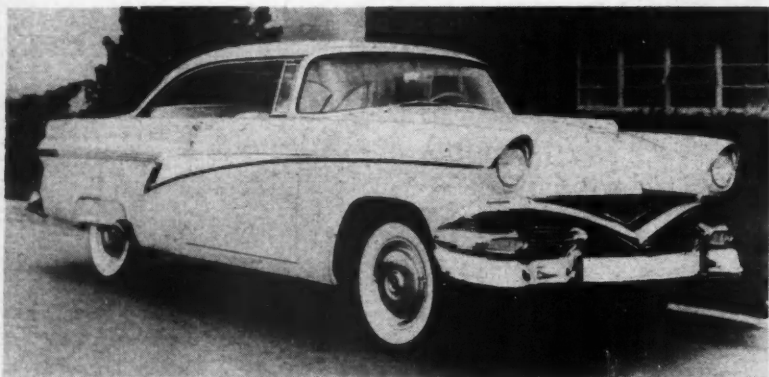
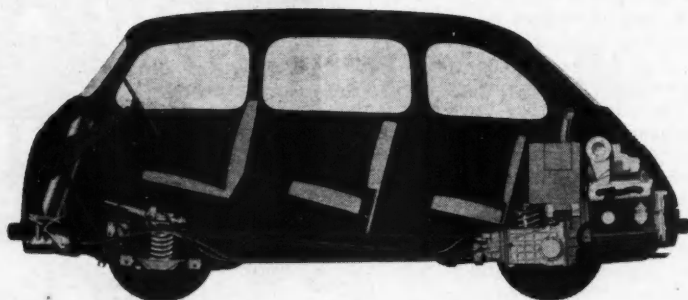
CITY.....STATE.....

(Please print or typewrite)

IN KITS
AS LOW AS
\$46⁹⁵
PLUS
INSTALLATION

***a car is
a many
splendored
thing***

by
Gordon
Wilkins



The Fiat Multipla is Italy's extremely economical and versatile thing (car-bus-truck?) that seats 6 as a bus or, with the seats folded down, carries 770 pounds of freight on a 19-square-foot area. Using many Fiat 600 sedan parts, such as the 38.7-cubic-inch, 22-hp, 4-cylinder engine and 4-speed transmission, the Multipla cruises at 50 mph with a full load, giving better than 48 miles per gallon. Easy access to the interior is provided by 4 doors; a small radiator in the front heats incoming fresh air. Coil springs at all 4 corners give the tiny car excellent handling characteristics



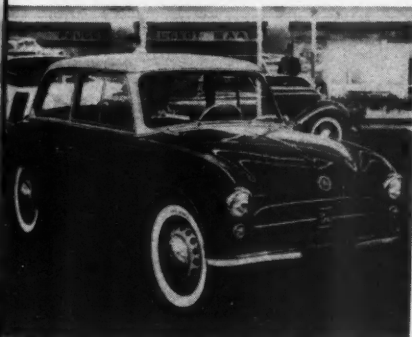
Ford Motor Co. of Canada presents 2 new models: the Meteor and Monarch. A massive V grille distinguishes the Meteor Victoria 2-door, one of the Rideau series cars. Powered by a Ford 202-hp V8 and Mercomatic transmission, it is otherwise quite similar to U.S. Fords. The Monarch is more like a U.S. Mercury, having a larger engine (up to 225 hp) and a special automatic transmission. Conventional and overdrive transmissions are available, as are a number of engine and accessory options. Safety steering wheel and doorlatches are standard



Renault's new rear-engined 5-CV Dauphine boasts a 51.5-cubic-inch engine (basically a 4-CV engine with bigger bore and valves) producing 30 hp. The car is longer and wider than the 4-CV, and the weight distribution has been changed by moving the spare tire and gas tank. Tested in secret on the island of Corsica, the newborn Dauphine attained an honest 70 mph and handled beautifully thru the mountains



East Germany's Wartburg P-311 is a 5-passenger sedan with a water-cooled 3-cylinder, 2-stroke DKW-like engine producing 38 hp to drive the front wheels thru a 4-speed transmission and free wheel. Maximum speed is near 78 mph

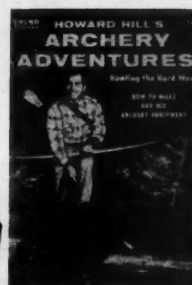


The P-70 Zwickau is another East German car with unique laminated flexible translucent plastic body panels. It seats 4 persons. The 2-stroke, 2-cylinder, front drive engine drives the sedan at speeds of 56 mph at 48 miles per gallon

"HOW-TO-DO-IT" TREND BOOKS FOR MEN

JUST OUT!

THE
FABULOUS
ADVENTURES
IN ARCHERY
OF
HOWARD HILL



LEARN HOW
TO MAKE AND USE
ARCHERY
EQUIPMENT

Howard Hill is known as the world's greatest archer. In this book you will share his every authentic and exciting experience as a bow-and-arrow hunter of wild game. You will enjoy this thrilling Trend Book by a man who "hunts the hard way" with incredible skill and courage.

OTHER TREND BOOKS • • • • •

SPIN TACKLE FISHING

A complete guide to ocean and fresh-water fishing with spinning tackle. Latest gear and methods illustrated.



HI FIDELITY

How to enjoy the best in music reproduction at lowest cost; how to install your own system with simple tools.

UNDERWATER

New worlds of underwater adventure, diving techniques, equipment, etc., revealed in this first how-to-do-it book on Skindiving.



HOME MUSIC SYSTEMS

Hundreds of ideas on how to install Hi Fi into your home. Many photos of ingenious and attractive home Hi Fi centers.

ALSO ON NEWSSTANDS • • • • •

AT
ONLY **75¢**
OR MAIL
TODAY

TREND BOOKS

5959 Hollywood Blvd., Los Angeles 28, Calif.

I am enclosing \$_____ @ 85¢ each (to cover postage, etc.)

Please send me the following books as indicated:

☐ ARCHERY ADVENTURES ☐ SPIN TACKLE FISHING
☐ HI FIDELITY ☐ UNDERWATER
☐ HOME MUSIC SYSTEMS

name _____

address _____

city _____ zone _____ state _____

DRIVING AROUND

with
WALT WORON



LAST MONTH as I laid plans for a trip to New York and Detroit it was hard to bridle my enthusiasm. Capping off my attendance of the preview of General Motors' Motorama in New York City was to be my drive back to Detroit in a Dodge 500, and a spin there in the intriguing new Citroen DS-19.

After seeing only photocopies of renderings of the GM dream cars, it was a delight to see them in metal and Fiberglas form. And seeing how accurately Charley Davison had portrayed the Firebird II (in cutaway form on this month's cover) was a pleasure indeed.

If the trip back to Detroit in the Dodge 500 taught me one thing, it reaffirmed 2: it's extremely wise to check on weather conditions before starting on a trip; and, lots of horsepower is of little use on snowy or icy roads. Don MacDonald and I had decided to take the Pennsylvania Turnpike route to Detroit, started in sunny weather, but rapidly approached a cold weather front. Stopping at a Howard Johnson's, we saw from the paper that if we cut north we could miss the storm. Apparently we didn't cut fast enough for we ran into it anyway. Until we put chains on the Dodge, and even after, we had some anxious moments, slipping and sliding when we applied the too-easily-available power to the rear wheels. We had to travel so slowly that we were still in central Pennsylvania at nightfall, staying there overnight, then driving on to Buffalo, N.Y., and across Canada to Detroit the next day.

This delay created another dilemma too, in that the storm had moved in on Detroit and it was impossible to move the Citroen out of the Sports Car Show at the Henry Ford Museum in Dearborn. I feel a personal regret over this unfortunate turn of events, but luckily we were able to arrange for our Engineering Editor to fly to New York later in the month, following the car's shipment to that city. What John Booth wrote about

the citroen ds-19

will have to be taken with quite a few bucketsful of sleet and snow, for those were the conditions that plagued him when he drove it. As he said,

"Unfortunately, I had absolutely no cooperation from the weather. There was freezing rain and the streets were sheets of glazed ice. Anyway, here are my impressions:

"The engine started easily, idled very smoothly and silently for only 4 cylinders. I placed the gearshift lever in low and pressed the accelerator. The hydraulic clutch engaged automatically and the car moved forward. Shifting thru the 4 forward gears was awkward from the standpoint of the gearshift location above the centerline of the spokeless steering wheel and also because the car was not tuned properly. Tho the clutch engaged too quickly, the Citroen engineer with me said that it would be a smooth action unless you pressed down hard on the accelerator. In other words, the hydraulic clutch engages directly commensurate with the speed of throttle action.

"To shift from 1st to 2nd, you can move the lever into 2nd while the car is accelerating in 1st. When you let up on the throttle, the transmission shifts to 2nd. Downshifting can be done the same way, but not until the car slows down to the critical rpm, determined by the governor. Also, assuming that you are traveling at 40 mph and remove your foot from the throttle to stop, the clutch won't disengage until the car slows down to about 13 mph.

"The icy conditions prevented any cornering, but I was able to make a hard stop on a weather-protected street. The nose did not dip at all and the rear end also stayed put. The engineer claimed that body lean in turns is practically non-existent, and if former Citroens are a criterion, I certainly have to believe him.

"Power steering was very smooth and effortless from lock to lock, but I couldn't detect any road feel, due again to ice. I did notice that, while at a standstill, a turn from lock to lock created some resistance, so it is possible that a certain road feel is



inherent. Since all 4 wheels are independently air-and-oil sprung, and the car has front-wheel drive, the characteristics of former Citroen cars will be evident.

"Braking on ice produced a heart-in-mouth feeling for 2 reasons: the valve to the hydraulic accumulator wasn't right, creating an abrupt action; and, the brake pedal is a small power button with only about one-half inch total travel, taking some time to get used to. The inboard-mounted brakes are apparently very positive, but I could detect no brake feel. The harder you press the dimmer-switch-like pedal, the quicker you stop. The foot-operated emergency brake on the left side of the compartment works on the front brakes.

"On rough roads, bumps could be heard as solid thumps, but the ride was remarkably smooth, with no sway, rock, or oscillation. The car gives an unusual feeling of solidity, but at the same time irons out bumps before they reach the unitized body. Ride levelers on *each* wheel keep the car level regardless of load or load position. With the selector valve—it's mounted forward of the driver's door at floor level—set at normal, the car sits about 6 inches above ground. On unimproved roads you can switch the valve to country driving and the entire frame and body rises up 3 inches!

"The driving position is good, with plenty of room to stretch around in. You sit down inside the car, with the floor located 9 inches below the bottom of the doors. The engine extends some 16 inches into the front compartment, but the front seats are designed for 2 persons. The soft, foam-rubber padded seats were not too well shaped and were covered with a felt-like cotton. The front seatbacks recline by loosening 2 knobs.

"After I got back with the car, I got outside and tried hard to rock it. I also tried to bounce the front and rear with my own weight. I couldn't move it. It was just like it had no springs at all.

"I'm sure sorry that I couldn't have put the Citroen thru its paces, for I'm really anxious to test the suspension. As soon as they get more cars into the country . . ."

I am just as impatient as John is, and as impatient as I'm sure the West Coast distributors are. When they get their 1st DS-19 it will be made available to us for a complete road test. In the meantime, I have contented myself with driving a DeSoto Firedome hardtop (our full-scale road test is in this issue), a Volkswagen and Renault (both of which will be covered in a comparison test next issue), and a rather unusual and very fast automobile, a . . .

supercharged '56 plymouth

With performance to surpass that of Plymouth's own Fury and a sound to match that of a screaming banshee, this blown Plymouth supplied to me recently by McCulloch Motors is an impressive package indeed. It smashed acceleration times set by the 4-barrel-carbureted '56 Plymouth as easily as a mallet splatters an egg.

Take a look at these comparative figures:

Speed or Distance	200-hp '56 Plymouth	McCulloch-Supercharged '56 Plymouth
0-60 mph	11.9	8.2
1/4-mile	18.9 (76 mph)	16.7 (89.8 mph)
30-50 mph	4.4	2.8
50-80	13.4	8.9

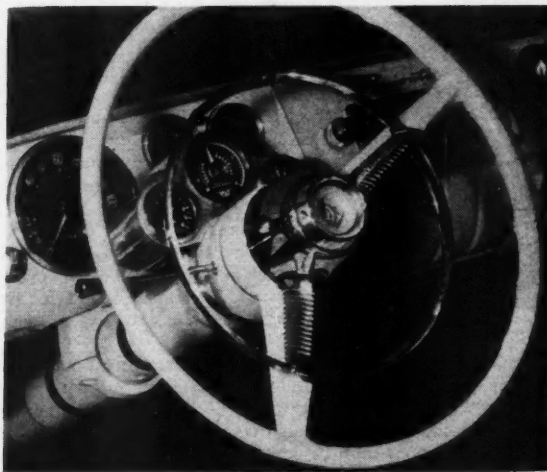
These figures put the blown Plymouth in the hopped-up Corvette and T-Bird class. And by "hopped-up" I mean one such as the '54 Corvette with '54 Caddy engine that I drove back in '54. The 0-60 runs were made using LOW range of PowerFlite only, while the 1/4-mile runs were made using LOW, and shifting to DRIVE at around 60. The 30-50 runs were all made in LOW, while the 50-80 ones were a combination of the 2 gears. Anytime you downshift below 60 mph with this setup, you get not only a surge when the transmission drops down a gear, but another one when the blower cuts in. The blower takes hold between 3000-3500 rpm.

The additional instrument panel on the steering column of the Plymouth is a worthwhile option at \$50 above the \$285-300 cost of the blower kit. It has a gauge to show blower pressure, another to show manifold pressure or vacuum, and a 3rd one to indicate fuel pressure. All of these are important to the operation of the blower and should be watched closely to determine if the right amount of fuel is getting to the engine, if the blower is putting out the right pressure, and if the pressure drop between the supercharger and manifold is not excessive. Too lean a mixture can cause detonation and resulting warped valves and/or burned pistons, so it behooves the owner of such a car to keep a watchful eye on the fuel pressure. Too rich a mixture will cause the engine to load up and evince complaints from passengers as to gasoline fumes.

If you feel that the '56 Plymouth is dead on its feet (which I don't), you can really get it up on its tiptoes with this blower. If you're going to use the added power much, tho, the best place for it is on a dragstrip or to compensate for the power loss you mountain dwellers experience with your cars.



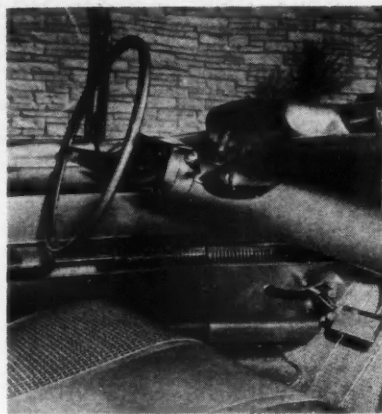
COLIN CREITZ



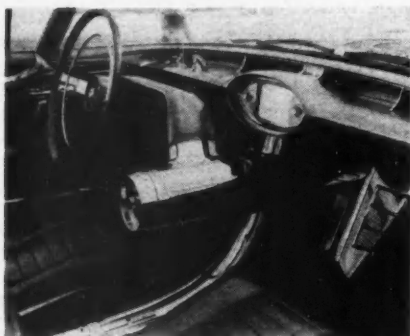
I HAD A DREAM Which Was Not All a Dream continued from page 21



R



S



T

wrapover but one-piece doors. In any case, expect to be doused when you open up in a rainstorm.

Biggest question mark is body or body-frame construction itself. None of the dream jobs pictured here entirely lack frames. Drawback of pure unit construction is the cost of tooling, coupled to umpteen more separate welding operations.

A car with a frame can be stiffer for less cost, and will suffer less in accidents, especially those from freak angles. However, unit construction may fold up like an accordion but nevertheless you will walk away because of the desirable crumple rate.

Look for really beautiful, fully exposed, cast (hubcap-less) wheels (O), with equally interesting tires (H) to match. The advent of multiple-spot, almost fadeproof, disc brakes (MT, March '55) forces a design that will genuinely cool the brake, but unfortunately it must protrude outward to make room for this brake. Stylists worry about curb damage to the relatively delicate castings.

As we have said many times before, the turn of the decade will see the end of springs as we know them. Power assists will probably be standard in the medium-price field and above, operated from a central hydraulic system. There may be much that is new in powerplants, but these will be discussed in next month's MT.

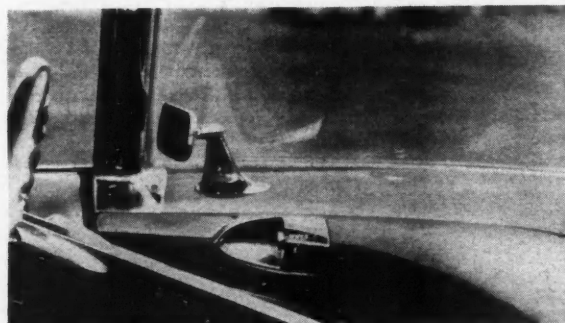
Interior stylists are perfectly capable of creating production versions of the show cars' beautiful 4-passenger interiors right now, but feel that acceptance would be limited. It will take a tremendous educational campaign to woo the public away from the idea that a body must be designed around the rare occasions when 6 people are stuffed in the car.

There is also no good reason for instruments to be encased

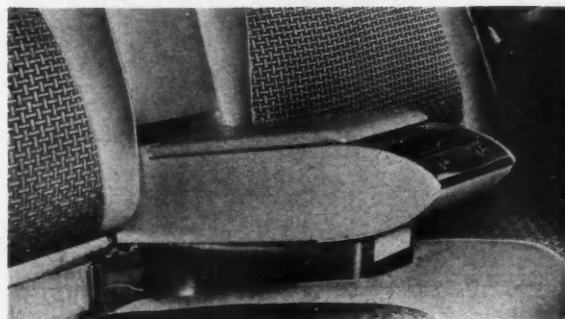
in a panel that stretches the whole width of the car. Unusual assemblies that are perfectly feasible for 1960 production are shown by the Golden Rocket's (R) and Impala's (S) designs, especially if the waste space in the doors under the vent wings is utilized for glove compartments.

The rear-view television set as on the Centurion (T) is strictly a gimmick that could easily be made available for a price, like Highway Hi-Fi and Autronic Eyes. More practical is the neat inside mounting of rear-view mirrors as on the Golden Rocket (U). Interiors in general will be made more novel and useful by moving items like window and seat buttons away from their time-honored location in the door panels, as on the Impala (V).

It all adds up to a picture of continuing evolution, but at a faster pace than heretofore.



U



V

Olds Road Test

the window-sealing strip and upper corner of the rear-quarter panel. Like all phases of workmanship, this is a function of quality control. Other Olds 4-door hardtops examined varied from good to near perfection in door fits and window sealing. There was general noisiness thruout the convertible-like windows. This indicates poor sealing due to lack of usual window-channel support. Four-door hardtop construction in itself was very rigid and the supporting post between the doors was solid and free from noise. Sturdy new front bumper seemed like one of the best yet for general defense.

We had no difficulties with the Olds on breakdowns or failures. A few rattles did develop in the rear doors; these weren't serious. The upholstery and floor mats took our rough treatment unusually well.

SERVICING

A major saving to owners of the new Hydra-Matic will be the elimination of adjustment costs on transmission bands; no such adjustments are necessary on the new transmission. We did not have to add oil at any time during our test. Olds (like all GM cars) has the new T-3 headlights to permit easy focusing with less time and cost involved. A new Delco distributor which allows point adjustments thru a small external door without removing the cap will be cheered by service managers. It will result in more accuracy since a dwell meter will replace feelers in Olds service adjustments. A new Olds acrylic lacquer-based paint (an extra-cost option now available in rose and white) promises more durability, requires only washing. The important engine components present no difficulty in access once the big aircleaner is removed. Generally sturdy and well put together, Olds shouldn't bring on any unexpected servicing costs.

OTHER OPTIONS

Olds offers synchromesh or Hydra-Matic (both '55 and '56 versions available) on 88s and Super 88s, with new Hydra-Matic standard on 98s; no overdrive available. Air conditioner has new drive ratio to permit 5 per cent faster running for greater efficiency, more capacity, shorter cool-down time. Available, too, are power seats that move in 4 or 6 ways and reach their zenith on 98 Holiday and Starfire models where seat moves back and forth automatically as door is opened or front seatback tilted to allow suitable entry and exit space for front or rear passenger. Naturally you can also plunk down your money for such extras as power windows, Autronic Eye (for automatic headlight dipping), seat belts, custom upholstery, special signal-seeking radio, or just about anything you can think of.

Dual exhausts are available thruout the line and you can get the 240-hp engine in

a standard 88, but as we go to press Olds has announced neither a powerpack as such (altho special cams and gaskets are available) or any Chevrolet- or Pontiac-like hot-engine option. This may be a necessary, or at least desirable, forthcoming option if Olds wants to retain the respect it earned in '55 stock car racing circles (out-right IMCA championship and number 2 car in NASCAR circles).

OTHER MODELS

You can go either way from Super 88: to less fancy 88 with 10 fewer horsepower, or to the more-luxurious-than-ever 98 which uses the 240-hp engine. The 88 line includes 2- and 4-door hardtops and sedans. Basic engine difference is in carburetion—the 88 also has new T-type manifold topped by new Rochester 2-barrel carburetor with throttle bore increase from $1\frac{1}{16}$ to $1\frac{1}{8}$ inch. Compression ratio is same as 240-hp engine and the torque is 340 rather than 350. The whole package results only in slightly lesser bhp per cubic inch ratio of .71 compared to .74 on the bigger engine. Basic body dimensions on 88 and Super 88 are identical. Super 88 offers same body options as 88, plus a convertible. New 98s are downright plush, with same body models as Super 88 line excluding 2-door sedans. Easily distinguishable 98 has distinctive side trim and tail lights, 4-inch longer wheelbase; is 9 inches longer overall.

—Al Kidd



A LONG & healthy life!

... is assured your valuable copies of **MOTOR TREND** with this durable binder! In a deep, rich brown, this leatherette binder is gold-stamped on the front and serves well as a convenient keeper of an entire year's collection of **MOTOR TREND**.



Send \$2.25 today for yours and keep all your **MOTOR TREND**s in one place! Send to MT Binders, 5859 Hollywood Blvd., Los Angeles 28, Calif.

ENGLISH FORD PARTS

- We have the largest stock of parts for English-built Fords in the United States covering all models—Anglia, Prefect, Thames, Consul, Zephyr and Zodiac.
- Orders shipped same day received. Ask for part needed by year and make.
- Write, wire or phone John Fisher, Webster 3-5911
HOLMES TUTTLE FORD
7122 Beverly Blvd., Los Angeles 36, Calif.

RESTORE LEATHERS AND PLASTICS

"NUAGANE" Leather Lacquer
"PeVeC" Plastic Lacquer
Made in England and used all over the world for over 40 years.

Fadeless — Flexible — Waterproof — Durable

24 COLORS TO CHOOSE FROM
Write for information and free color chart
GRAYS HARBOR MOTORS
First & G Streets, Aberdeen, Washington
IMPORTER U.S.
Except Ore., Calif., Nev.

Now... GET LONGER LIFE FOR YOUR BATTERY

Amazing "NEW LIFE" battery rejuvenator extends useful life of new or old batteries for many months. Use lights, heater, radio as much as you like. Get sure starts even in zero weather.
NO RECHARGING NECESSARY! "New Life" keeps battery charged automatically. Get Faster Starting — Greater Power. Easy to use! One treatment lasts entire life of battery! Money Back Guarantee. Use 1 box for 6 volt, 2 boxes for 12 volt batteries. Rush only \$1.00 per box.
JSM PRODUCTS CO. 1118 CASTLETON RD., DEPT. 45
CLEVELAND 21, OHIO

SAVE MONEY with SPARKTEST
YOU can eliminate needless costly tune-ups with **SPARKTEST**—your personal **MOTOR DETECTIVE**. **SPARKTEST** is a simple, do-it-yourself tool which enables you to detect faulty or defective spark plugs, wiring, head gaskets, distributor caps, and breaker point gaps in a matter of minutes. Complete instructions included for fool-proof operation. Cash, check, or money order with order \$1.95 each; COD orders \$1.95 plus postage.
CMP Associates, Dept. A, 4900 W. Madison St., Chicago 44, Ill.

and
still the
BEST!

For 20 years Porter has been engineering and producing the best available muffler exhaust system products. Your authorized Porter dealer can show you how this background makes Porter your best bet for giving your car added power and increased gas mileage. See him today.



PORTER

MUFFLER MFG. CO., Inc.
11820 W. Olympic Blvd.
Los Angeles 64, Calif.

**HUB
CAP
LOCKS**

Prevent tampering with valves, theft of hub caps, wire wheel discs, tires.



(Pat. 2708-944)

Easily installed—remove valve cap, screw on locks with key.

Set of four with two keys.

ONLY \$2.49 ppd.

KEY KAP CO.

739 S. Main St., Dayton 2, Ohio

SEAT BELTS

All Nylon

C.A.A. Approved **\$9.95**
11 colors

★ ★ ★ ★ ★
SUPER CHARGER
MCCULLOUGH \$255.00 UP

Send 25c for Sumar Catalog
SUMAR SPEED EQUIPMENT
109 N. 7th • C-8174 • Terre Haute, Ind.

DUNCAN HINES
Suggests

Whether you are sun worshiper, student of Indian lore, or just plain tourist—Arizona has much to offer

A LOT OF TERRITORY—that's our Great Southwest, which takes in the states of Texas, New Mexico, and Arizona.

Starting from the west, we 1st visit Arizona, where the clear, invigorating air provides a heaven for sun worshipers. In addition to its Grand Canyon, Painted Desert, and Petrified Forest, Arizona offers many other attractions—mountains and desert, canyons and cacti, Indian reservations and ruins, ghost towns and modern cities, missions and ranches. In winter there is skiing in the mountains around Tucson, Prescott, and Flagstaff. And all year around, there is an abundance of sun.

There are 14 Indian tribes now on reservations in Arizona. They hold dances and ceremonials at various times thruout the year. For example, the Yaqui Indians hold ceremonials for several days, ending on Easter Eve. These half pagan and half Christian rites are held at Yaqui villages near Phoenix and Tucson. Some of these ceremonials, like the annual Southwest Indian Pow-wow in Flagstaff in July, with thousands of Indians participating, are brilliant spectacles.

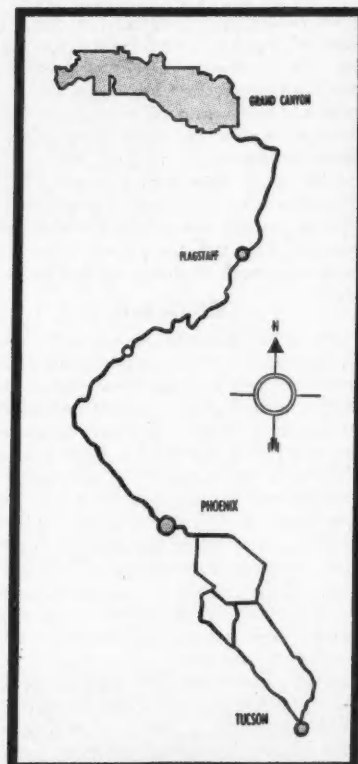
Our itinerary begins in the southern part of the state at **TUCSON**. Nine miles south of Tucson is San Xavier del Bac, one of the most beautiful examples of Spanish mission architecture in the Southwest. And just 2 miles north of Nogales are the Tumacacori Mission ruins, a reminder of the old Spanish days. This area abounds in magnificent scenery, particularly impressive to Easterners.

Place to Eat: Located in the foothills of majestic Catalina Mountains is **El Corral Cafe**, a rambling ranch-type building, encircled by a corral. It is 7 miles northeast of downtown Tucson, at 2200 E. River Rd. Specialties are fried shrimp, fried chicken and steaks. They are open from October to June, except Mondays, from 6 P.M. to 10 P.M. Dinner is \$2.50 to \$4, and a la carte.

Places to Stay: On Routes 80, 84, and 89, about 1½ miles north of Tucson, at 2726 Oracle Rd., is **El Corral Motel**, complete with car ports and swimming pool. Single with bath \$5 to \$6; double \$6 to \$9.

The **Riviera Motor Lodge** is 2½ miles northwest at 515 Casa Grande, on Route 84. It has phone, radio, and TV in rooms, children's playground, and swimming pool. Single with bath \$6 to \$10; double with bath \$7 to \$12. A little farther out, at 631 Casa Grande, is the **Terrace Motel**. Single with bath, \$5 to \$7; double with bath, \$6 to \$9.

As we go north, the next stop is **PHOENIX**. Not far away are the famous Pueblo Grande ancient Indian ruins. Other points

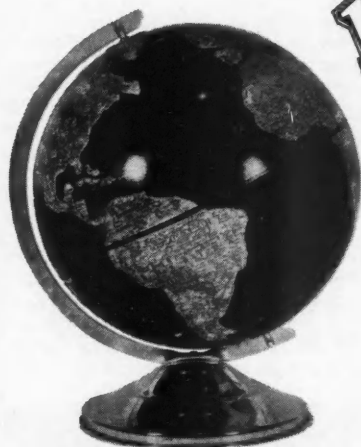


of interest are Papago Park, Superstition Mountain, Hieroglyphic and Echo Canyons. The fabled Apache Trail, starts at Apache Junction, 34 miles east of this city. About 60 miles southeast of Phoenix, at Coolidge, is the Casa Grande National Monument, well-preserved ruins of 4-storied prehistoric community dwellings. It is especially interesting for its structure, canal system, and calendar holes for reckoning time. The Pima Indian Reservation is also near by.

Place to Eat and Stay: Eleven miles northeast of Phoenix in sunny desert country, is the 82-room **Camelback Inn**. American Plan rates are single with bath, \$22 up daily, and double with bath, \$18 up daily per person. It is open from October to May.

Places to Eat: There is the dining room and coffee shop of the **Hotel Westward Ho**, the widely-known resort hotel. They serve a variety of foods, but perhaps are best known for their charcoal-broiled sirloin steaks. Located at 618 N. Central, it is open from 7 A.M. to 8:30 P.M. Prices are (Continued)

ST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET



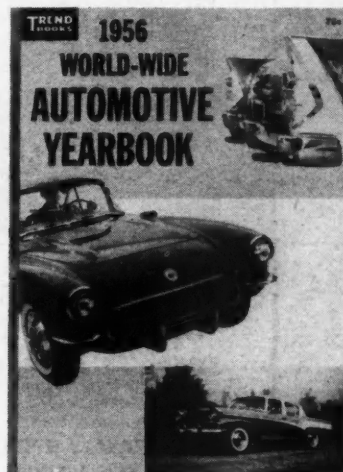
1956

WORLD-WIDE AUTOMOTIVE YEARBOOK

Complete illustrated guide to every production car built in the world today! Get the complete up-to-date world car picture from this brand new, photo-packed book; a terrific reference book for your automotive library.

ON YOUR NEWSSTAND NOW!

"124" makes, specifications, prices!



JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET! JUST OUT! BEST YET

OTHER IMPORTANT TREND BOOKS!



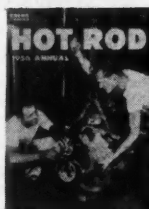
PLASTIC CARS
How to design and build a car body from plastics; complete manual with illustrations of latest Fiberglass cars.

WORLD'S FASTEST CARS
An exciting story of the men who built the great Ferraris, Bugattis, Daimiers, and all of the world's speedsters.



CUSTOM CARS 1956
A wealth of "how to" material, hundreds of pictures, detailed description of custom work and cost analyses—plus newest customizing ideas.

HOT ROD ANNUAL
How to build hot rods and how to make them go. 1956 edition has full details on OHV-V8's; all about engine swapping.



CLASSIC CARS & ANTIQUES
A treasure house for the enthusiast, with over 200 photos of rare and priceless cars, both classics and antiques.

ONLY **75¢** AT YOUR NEWSSTAND!

(or mail your order today!)

TREND BOOKS

5959 Hollywood Blvd., Los Angeles 28, Calif.

I am enclosing \$_____ @ 85¢ each (to cover postage, etc.)

Please send me the following books as indicated:

- ☐ 1956 WORLD-WIDE AUTO YEAR BOOK ☐ PLASTIC CARS ☐ CLASSIC CARS
☐ HOT ROD ANNUAL ☐ CUSTOM CARS ANNUAL ☐ WORLD'S FASTEST CARS

name _____
address _____
city _____ zone _____ state _____

the nearest to our big listing and your present location is in our Special

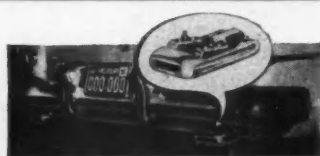
\$1.00 FREE
CERTIFICATE - See Inside Back Cover

WHOLESALE CATALOG

36-37
25c

**SEND 25c FOR
WHOLESALE 1956
SURPRISE CATALOG**

**HONEST CHARLEY SPEED SHOP
BOX MT 1904
CHATTANOOGA, TENN.**



BUMPEREX

(Bumper-Exhaust Extension)

Design of the Bumperex gives the illusion of passing thru the bumper face bar, making it look like part of rather than an addition to bumper. Can be installed in pairs or as single unit on either right or left side of bumper. Made of heavy bumper stock steel, triple chrome plated. A specially designed attaching bracket eliminates need for drilling holes. List \$4.95 each, postpaid.

If your dealer can't supply you, order direct and send us his name. Send check or M.O. Money back guarantee.

MANUFACTURED BY

ST. LOUIS PRODUCTS CO.

2754 Walton Rd. St. Louis 14, Mo.



NEW CAR EMBLEM. Rust-proof 4 in. attach to license plate. Sturdy cast aluminum. Painted in correct insignia colors. Available for MD, RN, RK, DD, F.D., Aux. F.D., Aux. Pol., Civ. Defense, Elks, Mason, K of C, Shrine, Eagle, K of Pythias, Kiwanis, Rotary, Moose, Clergy. Send \$1.49, 2 for \$2.58. Your own design made to order (min. 50).
Sta-Dri Co., Dept. M4, Whitestone, L.I., N.Y.



the Conservative Britons

THREE ENTIRELY new British Fords have been announced—new in the sense that they are different from the previous models. True, they are longer, wider, and more powerful, but they betray a certain lack of originality in conception: sort of newly made suet puddings of the type the British love so well. If foreign sales are of importance, there is bound to be some disappointment, at least as far as the U.S. is concerned.



As far as looks go, one might just as well buy a '55 Ford as the '56 Zodiac shown here. The Zodiac is the most luxurious of the British Fords and is 2 inches longer than the 178.4-inch Zephyr. Both of these cars are powered by the same size 6-cylinder, overhead-valve engine producing 86 hp at 4200 rpm; torque is 136 pounds-feet at 2000 rpm. Displacement is 156.7 cubic inches with a bore and stroke of 3.25 x 3.13 inches. The Consul, smallest of the British Fords (169.9 inches overall length), is powered by a 103.9-cubic-inch 4-cylinder ohv engine producing 59 hp at 4200 rpm; torque is rated 92

Basic dimensions of the cars were determined by designing them around "Oscar" (a statistically average man evolved as a result of 70,000 examinations carried out by the U.S. Army). Seating and control layouts were designed around his dimensions, these figures then determining the minimum wheelbase and body width. Ample room to seat 6 persons in comfort is claimed, tho the British seem to have a strange idea of comfort. Front seats are 56.6 inches wide at the hips, 52.5 inches at the shoulders; rear seats are about an inch narrower.

—Gordon Wilkins

reasonable. And if you like Cantonese food—all cooked to order—you can find it at **Lee's Restaurant**, 2310 E. McDowell Rd. It is open from 5 P.M. to 2 A.M., closed on Mondays. Dinner from \$1.50 to \$4.

Places to Stay: On Route 80, at 1208 W. Van Buren, is **Greenway Motor Hotel**. It has a swimming pool, playgrounds for chil-

dren, and TV in rooms. Single with bath, \$5 to \$7; double with bath, \$6 to \$7, reserved. A new super deluxe motel is the **Sands Motor Hotel** at 3320 E. Van Buren. It is completely air-conditioned and is, of course, equipped with a swimming pool.

At 2745 E. Van Buren, on Routes 60, 70, 80, and 89, is the famous (Continued)



World's Finest Oil Filter ~~\$6.95~~ by Special Arrangement **\$4.95** postpaid

"AUTOMATION" (production-line magic) did it. Thousands—yes, hundreds of thousands—of laboratory and field tested **BRONZE**—permanent filters have been sold at \$6.95. Regular users include Federal Government departments, large trucking companies, fleet operators, and leading taxicab companies.

A NEW LOW PRICE Now you may own the finest filter obtainable for only \$4.95 (authentic \$6.95 value). We have full patent rights to manufacture it with our new high speed, top

quality production methods. You save 3 ways . . . 1—In double to triple engine mileage. 2—In filter-pack replacement savings. 3—In oil changes. (Your oil is good for over 10,000 miles with a genuine Perma-Bronze Filter.)

ENGINES LAST UP TO 150,000 MILES A genuine Perma-Bronze filter is your best insurance against needing an overhaul until you're tired of driving your car . . . and you'll trade it in at a preferred price, too.

HOW PERMA-BRONZE REDUCES ENGINE REPAIRS TO A NEW LOW The Perma-Bronze filter is a development of the German sintered bronze discovery of fusing together minute balls of bronze with interstices which permit clean liquids but little else to go through. Perma-Bronze screens out all dirt and metal grit larger than .00015 of an inch. Nothing gets through that can possibly hurt any precision part of your engine. This is the dramatic Perma-Bronze secret for protecting your engine and increasing oil life.

PLUS—FINEST ACID NEUTRALIZER Every Genuine Perma-Bronze filter has a replaceable magnesium "moisture barrier" acid neutralizer. It neutralizes the corrosive sulphuric acids produced by combustion. Little wonder that this dual-protection doubles and even triples engine life.



WHICH BRONZE FILTER SHOULD YOU BUY? Judge carefully! Don't fall for trick shapes from martini glass to "Mae West" silhouettes that reduce total filtering area . . . and don't settle for shorter models with ends bolted on. Genuine Perma-Bronze filters give you up to 43% more filtering area—PLUS fused top and bottom plates which definitely assure against seepage of grit, grime and acids—PLUS 14% thicker walls for superior filtering efficiency!

DOESN'T STEAL THE DETERGENTS YOU PAY FOR Modern motor oils contain excellent "detergents" developed by top chemical and refining engineers. They help prevent the formation of gums, lacquers and sludge in your engine. Why lose these helpful ingredients? Being liquid, they go through with the clean oil when you use a Perma-Bronze filter. Metal cannot soak up anything (fabric and paper filters can).

AT FILTER CHANGING TIME? Just wash your Perma-Bronze filter in kerosene or other solvents and it's better than a new "old-style" cartridge . . . without the expense. Then you're all set for miles and miles more of s-a-f-e engine operation, with all the pep that a power plant gives you in return for good care.

USE IT FOR 30 DAYS AT OUR RISK! When you order your genuine PERMA-BRONZE Filter you are not "buying" now . . . we want you to use it, compare it, test it any way you please for 30 days—then, and only then, do we consider the sale final. We further stand behind our superior product for a full 10 years as per our guarantee.

GENUINE PERMA-BRONZE EVERLASTING OIL FILTER

Leading Chemical and Metallurgical Researchers developed the superior quality and design of the genuine PERMA-BRONZE Filter. Now, mass production has reduced costs, making it possible to sell it for only \$4.95 "Postpaid to your door". You can't buy better than PERMA-BRONZE . . . so why pay more? If your dealer can't supply you, use coupon!

© 1956 Engine Accessories Mfg. Co.

send only
\$7.00
(PAY
BALANCE
C.O.D.)

Large "By-Pass" Element \$4.95
Fits all cars (except those few listed below.)

Giant "Full-Flow" Element \$8.95
Needed only for 1956 Chevy V-8, Buick V-8, Olds V-8, Pontiac V-8, 1954-56 Ford V-8 and Mercury, 1952-56 Ford 6 and Lincoln, 1946-56 Chrysler.

Complete Filter \$10.95
"By-Pass" element with case and mounting bracket (for cars with no stock filter).



30 DAY TRIAL GUARANTEE

Use the Genuine Perma-Bronze Filter for 30 days at our risk. Test it and compare it with any other make. If not 100% satisfied, simply return it for a full refund. We guarantee it to be the finest quality filter of its kind at any price, and further guarantee it for 10 full years.

C. M. Rogers

DEALERS AND JOBBER'S NEEDED

Dealers and jobbers are urgently needed to handle the ever-increasing consumer demand created by powerful advertising and editorial articles in leading national magazines. Get your share of this rapidly expanding market. For complete details, write, wire, or phone Raymond 3-4978.

CLIP AND MAIL COUPON TODAY!

ENGINE ACCESSORIES MFG. CO.
5801 E. Beverly Blvd.
Dept. 517, Los Angeles 22, Calif.
Phone: RAYmond 3-4978

- ☐ Rush "By-Pass" Filter Element at \$4.95
☐ Rush "Full-Flow" Filter Element at \$8.95
☐ Rush Complete Filter Unit (Incl. Case) at \$10.95

- ☐ Enclosed is \$_____ full price, ship postpaid, Calif. Residents add 3% sales tax.
☐ Enclosed is \$1.00 Deposit—ship C.O.D., plus postage.

GENTLEMEN: Please send me PERMA-BRONZE filter checked at left. I understand that if I am not completely satisfied I may return it for full refund within 30 days.

MAKE OF CAR.....YEAR.....

MODEL.....NO. OF CYL.....

NAME.....

ADDRESS.....

CITY.....ZONE...STATE.....

send for
FREE
catalog



Service
ALL cars

with **Snap-on Tools**

Want service tools used by most top professional mechanics? Then it's *Snap-on* tools for you. They help handle repairs faster, easier, better . . . outlast ordinary tools to pay for themselves over and over. You choose from the most complete line of auto tools, including a wide variety of wrenches in Whitworth and Metric sizes for foreign cars.

Sold exclusively by *Snap-on* branches and *Snap-on* men or direct from the factory. Write today for free Metric-Whitworth folder and standard tool catalog. Start your basic set now.

SNAP-ON TOOLS CORPORATION

8023-D 28th Avenue • Kenosha, Wisconsin

*Snap-on is the trademark of Snap-on Tools Corporation.

POW-AIR Super Charger

for ALL CARS

PRICE \$22.50

PRICE \$27.50

FOR FOUR

BARREL CARB &

POWER PACKS

(incl. 2 extra

filters)

Increase ac-

celeration,

horse power,

gas mileage

and engine

efficiency with

this new super

charger-air cleaner combination. Air-scoop design captures air driven by your engine's fan, and the rush of air created by the forward motion of the car, thus increasing volume of explosive mixture at all speeds. Unit replaces stock air cleaner. No moving parts. Easily installed. Glass-fiber air-filter enables unrestricted filtered air to pass through carburetor under pressure. Life span of replaceable filter, 5,000 miles. Additional filters \$1.25 ea. Give your motor that "Car of the Future" feeling.

Guaranteed by Manufacturer

When ordering give make, yr., cyls. of car or truck

Tamarin Patent Products Co.

3116 Lake Hollywood Drive, Hollywood 28, Calif.

TONNEAU COVERS

THUNDERBIRD — CORVETTE

JAG — MG AND MOST POPULAR

SPORTS CARS

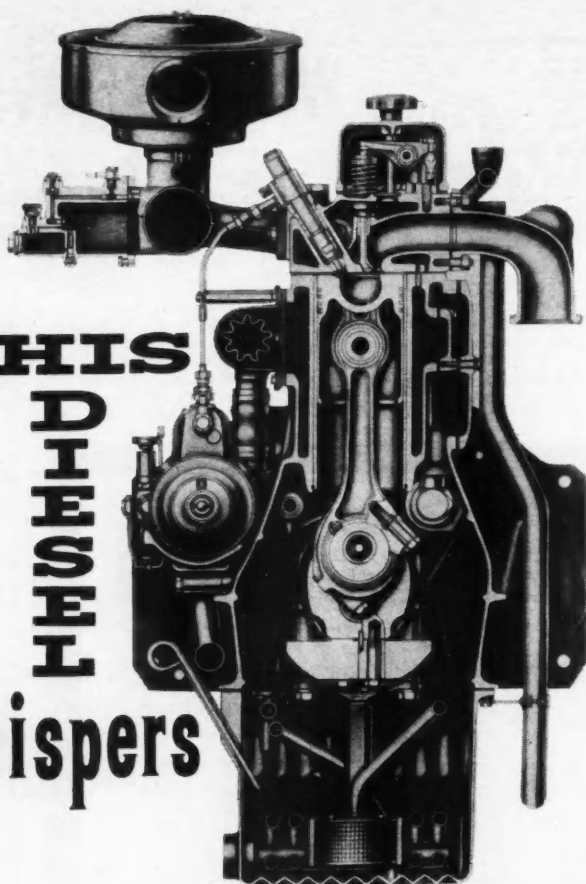
- CUSTOM STYLING
- HIGHEST QUALITY MATERIAL

ROBBINS AUTO TOP COMPANY

Phone EXbrook 5-9174

1453 Lincoln Blvd. Santa Monica, Calif.

THIS DIESEL whispers



THE NEW MAN "WHISPER" diesel engine, developed by Dr. J. S. Meurer in Germany, is expected to be introduced soon in the U.S. Greater fuel economy and elimination of the outstanding diesel drawbacks—exhaust smoke and combustion knock—are major advantages. The cross-section tells the secret of the Whisper engine: Instead of atomizing the fuel into a fine mist—up to now the prime ambition of diesel designers—

Dr. Meurer's system sprays it onto the wall of the ball-shaped combustion chamber (actually the top of the piston) and the swirling air vaporizes it. The fuel is thus gasified and mixes better with the air, resulting in quiet, smokeless combustion so efficient that it is reported to have driven a 10-ton truck 20 miles on a gallon of fuel. This new injection system could point the way to further diesel development for passenger cars and trucks.

and unusually pleasant **Desert Hills Motor Hotel**, with 119 deluxe units, a restaurant, swimming pool, and TV. Single or double with bath, \$7 to \$9.50. Farther east is the **Desert Star Motor Hotel**, at 4120 E. Van Buren. It also has a swimming pool and TV in rooms. Single with bath, \$5 to \$10; double with bath, \$5 to \$12.

Around **FLAGSTAFF** there may still be skiing at this time of the year. Besides winter sports, there is much of interest near here. There is Oak Creek Canyon, considered by many to be 2nd only to the Grand Canyon in coloring. Walnut Canyon National Monument, cliff dwellings, museums, and observatory—these are some of the other sights.

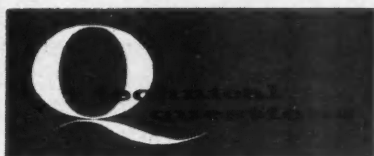
Places to Stay: There are dining facilities at the **Western Hills Motel & Coffee Shop**, one-half mile east on Routes 66 and 89. It has radios in rooms and a playground for children. Single with bath, \$5 to \$7; double with bath, \$6 to \$7. Reservations are re-

quested from May thru August. A quarter of a mile east on Routes 66 and 89 is the **Amber Sky Motel**. It too has radios in rooms and a playground. Single with bath, \$6 to \$7; double with bath, \$7 to \$11. One-half mile west at 311 Milton Rd., is the **Arizona Motor Court**. Single with bath, \$5 to \$7.50; double, \$6 to \$9.

GRAND CANYON No words can describe it—it has to be seen.

Places to Stay: There are accommodations for every taste and budget. There are auto-camp cabins and public campgrounds in Grand Canyon Village and at Desert View on the South Rim.

One of America's famous hotels, on the canyon's rim, is **El Tovar Hotel** (Fred Harvey chain). Built of logs and boulders, it has 81 rooms, 61 with baths. Single with bath, \$5 to \$7; double with bath, \$7 to \$9.50. (Next month: More of the Southwest—New Mexico and Texas.)



Q. I own a 1955 Pontiac and plan to install a McCulloch supercharger on it. Will this ruin the engine, transmission, or rear end? F. Hill, Cleveland, Ohio.

A. No. The modern supercharger, properly installed, should have no detrimental effect on the engine, provided the fuel-air mixture is not too lean. The transmission and differential are capable of handling the additional torque because a supercharger must have rpms to be effective. Before you get the real effects of a blower you are already in gear and moving forward. Most failures are due not to the torque output as such, but to the momentary snap as gears are shifted.

Q. I have noticed several ads referring to a cadmium battery for automobiles. I have been told they are not available in the U.S. and wonder if this is an import and how much it is. M. L. Saunders, Gainesville, Fla.

A. The ads you refer to are not for a nickel-cadmium battery. It is a lead-acid type with cadmium added. The nickel-cadmium battery is now made by the Sonotone Co. in Rochester, N. Y. It has a lifetime guarantee and costs about \$150 for a 12-volt unit. Its weight is 1/4 that of a lead-acid type.

Q. I have a 1940 Plymouth which has had 0.055 inch milled off the stock head. What should the compression be? Frank A. Finley, St. Louis, Mo.

A. The compression ratio should be 7.5:1.

Q. I have a 1940 Ford coupe on which I installed lowering blocks on the rear end. It seems to me the car steers harder now. Is this because of these blocks? J. K. Tims.

A. Yes; you have changed the caster angle of the steering system producing a greater tendency for the front wheels to follow a straight line. This will create more turning resistance at the steering wheel.

Q. I have noticed on a cold morning that dual exhaust cars smoke from only one side when they start up. What causes this, and is it good or bad? Jerry Scharf, Flushing, N.Y.

A. Good. It indicates the heat riser in the exhaust manifold is working properly. Due to oxidation caused by heat, the riser has a tendency to stick in an open or closed position.

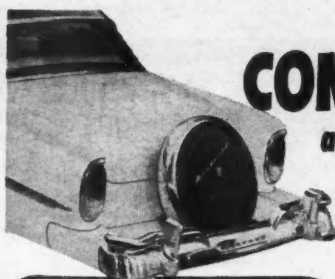
Q. Chevrolet says it broke a 21-year-old record at Pikes Peak. Is this right, and if so what car held the record then? Carlton Wingfield, Madison Heights, Va.

A. This is right. The record was held by a 1934 Ford roadster.

Q. In your February issue of MT you quote a top speed of 108.6 for the '56 Plymouth. I have an absolutely stock 2-door which will clock 120 mph consistently. Is my car unusually fast or was yours slow? Thomas McNulty, Bakersfield, Calif.

A. You had better have your speedometer checked. Our tests are made under scientific conditions using a panel of 6 stopwatches, 5th wheel, generating speedometer, and a crew trained in the intricacies of automotive testing. We find stock speedometers usually indicate 5 to 10 mph fast in the top speed ranges.

The MT staff enjoys answering your letters, but recently there has been such a deluge of correspondence that we cannot personally do so. Knowing you would prefer that we not neglect the magazine, we have instituted a policy of answering letters only in the Technical Questions column.



NOW! Genuine CONTINENTAL KITS at HALF of Car Dealer Prices!

Here's the world's greatest Continental Kit value—at savings up to \$100! Glamorous California styling . . . rakish tilt of tire carrier is custom-designed for your car, as is every other part. Stylish wrap-around gravel shields. Heavy 20 gauge tire ring. Sturdy, rattle-free!

Easy to Install Yourself: Kit braces to frame. Tire carrier is factory pre-assembled. Step-by-step instructions.

NOT A "FALSIE"—ALL PARTS INCLUDED: splash pan, bumper extension brackets, all-metal tire cover, tire carrier assembly—everything but emblem. Prime coated.

MATERIALS AND WORKMANSHIP GUARANTEED
NEW CATALOG OF CUSTOM ACCESSORIES
—free with order or send just 25¢.

COMPARE THESE PRICES!

Your choice of open or closed face plate (please specify)

Chev. 53-56	Buick 55-56	Cadillac 54-55
Ford 49-56	Chrysler 56	Dodge 55
Ply. 55-56	DeSoto 56	Lincoln 52-56
\$49.50	Dodge 56	Merc. 52-53
Chev. 49-52	Merc. 55-56	\$79.50
\$41.85	Olds. 54-56	Cadillac 50-53
Buick 54	Pont. 55-56	Cadillac 56
Merc. 54	Stude. 55-56	Thunderbird 55
\$69.50		\$119.50

Tire ring in chrome, \$10 extra. Write for information on cars not listed. Specify make, yr., mod., tire size & if tubeless. 25% deposit required. FOB L.A. Postage COD. Calif. residents add 3% sales tax.



A YOUNG MAN'S FANCY

URNS TO

SPORTSMAN

MUFFLERS — DUALS — HEADERS

DESIGNED FOR FINEST PERFORMANCE

Arnold Haviland Company

Defiance 22, Ohio

IN APRIL HOT ROD ...

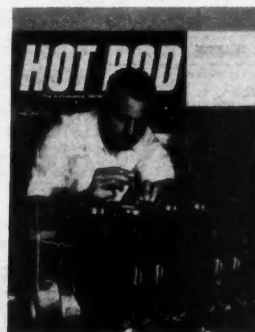
"Rodders test Golden Hawk"

MORE PAGES **8** MORE PAGES

BEGINNING:

"Building a flathead the right way"

... ON SALE MARCH 15



J.C. WHITNEY ALWAYS FIRST With the Latest

SEE the FOLLOWING 2 PAGES FOR MORE ITEMS

NEW SOUND SENSATION
THE MUSICAL ITALIAN BUS HORN Conversion Kit

Easily installed on all cars without special tools.

Electronic conversion kit that makes your stock horn sound like an Italian Bus. Splits stock horn sound into two notes—one high—one low—about 10 times a second whenever you hit your horn. Completely automatic. Just 3 simple wire connections. Can be changed from car to car.
Sets—4 or 12 Volts.
No. 608—POSTPAID Each \$6.95

Bronze Porous Oil Filter Element
with LIFETIME GUARANTEE and Built-in Magnesium Acid Neutralizer

Porous bronze Element never wears out or needs replacement. Lasts for a lifetime of the car. Element removes all harmful particles yet retains your expensive oil. Lets you drive up to 10,000 miles without changing oil. Fits all cars except those with Full Flow Oil System listed below. Store your money, model of car.
No. 114—Regular \$4.95.
Element only. POSTPAID \$4.95

Porous Bronze Filter Element for Full Flow Oil System—Fits V8 Buick, Olds, Cadillac, Lincoln, Plymouth, 53-54, Ford, Merc. 54-55, Chrys. 51-54, Dodge 53-54, Ford 46-54, 52-54, Lincoln 52-54, Chrys. 46-54, 48-54, Chev. V8 1956.
State car, year and model.
No. 117—POSTPAID, only \$8.95

SPECIAL: CAR PLAQUES

16 NEW & DIFFERENT DESIGNS
They're new! They're different! They stand out! Individualize your car. Hang one on the front and one on the rear. Spot your car anywhere.

Specify Plaque No. 610—POSTPAID \$1.98

Porous Bronze "GAS" FILTER

LIFETIME ELEMENT
For all Cars. Increases gas mileage. Keeps carburetor in perfect tune. Gives you extra mileage, power and pick. Lifetime Element screens out all harmful particles in your gas, results in better vaporization—prevents fouling. Easy to install.
No. 183—Regularly \$4.95.
New only. POSTPAID \$1.95

SAVE 1 GALLON IN 10!

"Econ-o-Miser" Fuel Pressure Regulator

Here's a remarkable development that will be standard equipment on all new cars from the next 5 years; the amazing new Econ-o-Miser that eliminates gas waste, saves up to 25% on gas consumption!
The precision-built Econ-o-Miser incorporates a large and sensitive diaphragm which causes an absolutely even fuel flow under all conditions, permits the ideal fuel/air mixture for top carburetor efficiency.
"Gives Faster Starts and Smoother Idling"
The Econ-o-Miser is guaranteed to give you smoother, faster acceleration. It eliminates excessive pressure on the carburetor, takes out "surge," prevents stalling, vapor lock, and flooding. You can easily install the Econ-o-Miser yourself.
Try the Econ-o-Miser at 60¢ Risk!
If it doesn't pay for itself in gasoline savings in the first 5,000 miles of driving, return it for a full refund of your purchase price!
Some car-owners report mileage gains of 20% to 25%. Think of the money saved—\$40 or \$50 every few months! Why not keep this money in your own pocket by installing an Econ-o-Miser right now.
No. 524—POSTPAID \$6.95

COIL SPRING WEDGES

Compensate for this natural sag of front coil springs. Restores original front end position.
Easy installation between coils with hammer as illustrated. No. 85—POSTPAID.
Set of 4 \$1.49

Quickly Pays for Itself

Carburetor works at maximum efficiency at 2 lbs. pressure. Without pressure regulator, fuel pump at high speeds can develop pressures up to 40 lbs., forcing gasoline through carburetor and causing fuel waste, loading up, flooding, stalling.
WHAT THE ECON-O-MISER DOES FOR YOU:
1. Smooths out fuel pump pulsations—eliminates surge.
2. Eliminates excessive pressure and loading of carburetor.
3. Prevents annoying vapor lock.
4. Gives you smoother idling and faster starts.
5. Prevents flooding and stalling due to excessive pressure.
6. Saves gasoline—up to 25%!
7. Reduces carbon formation—helps keep engine clean.
8. Saves frequent carburetor adjustment.
9. Reduces fire hazard.
10. Automatically adjusts for any altitude.
For All Makes and Models of Cars & Trucks.
No. 524—POSTPAID \$6.95

HOT SPARK INTENSIFIER
For all Cars. Pops up all ignition systems. Results in faster starting, smoother idling and better gas mileage. Overall improved motor performance. Attaches easily to your present coil without special tools. Also improves high speed performance and stops plug fouling.
No. 819
Each. POSTPAID \$2.49

Extra Deep Fender Skirts
For ALL MODELS 1955-56 FORDS
Large Flat Custom Style—Flash—No riveting.
EXTRA DEEP 2 1/2 to 3" deeper. Gives the car that distinctive Continental Look.
No. 358—PAIR \$10.95

For 1952-56 FORD All Models 6 Pc. TAIL LIGHT KIT
This New
Given That 1955 Olds "Look" To 53-54 Fords
Kit consists of 6 lenses, 2 chrome rims, 2 adapter plates. Easily installed in place of present rim without drilling or cutting. Can also be updated or leaded to the fender without further alterations. Lenses legal in all states. Adds class to body appearance & styling.
No. 483-52-54 \$9.95
No. 588-55-56 \$9.95

FLARED FENDER SKIRTS

All metal. Choice of Prime or Chrome Plated finish. Fits following cars:
49-54 Chev. 49-51 Ford 49-50 Olds 76, 88
exc. Bel Air 55-56 Ford 46-52 Plymouth
46-54 DeSoto 46-54 Frazer 49-52 Pontiac
46-52 Dodge 46-54 Kn. 52-54 Willys
PRIME \$75CHROME \$14.95
No. 48-54-Pair \$289-Pair \$14.95
53-54 FORD & MERCURY—prime \$7.94
No. 43-Pair \$11.95
1955 CHEV. prime. No. 118, pair \$11.95
1955 MERCURY, prime. No. 119, pair \$8.95
53-54 PLYM., prime. No. 120, pair \$8.95
53-56 PLYM., prime. No. 121, pair \$8.95
CUSTOM CHROME PLATED FLARED FENDER SKIRTS for cars above, exc. Merc. No. 148, pr. \$14.95

FRENCH LOUVER - Flare Model FENDER SKIRTS

Prime finish with rubber beading. Regular type.
Chev. 1955 Mer. 52-54
Ford 55-56 Mer. 49-51
Ford 52-54 Ply. 55-56
No. 430 - Pair \$14.95
No. 431 - Shallow Box type—Universal for Chev. 49-54 Pont. 49-52 For All Cars Listed Here
exc. Bel Air DeSoto 46-54 Ford 55-56
Chrys. 46-50 Ford 55-56 Olds 49-54
Dodge 46-52 Olds 49-54 model 76, 88
Kaiser 46-54 Ply. 46-54
Frazer 46-54 model 76-88 Willys 52-54
No. 430 - Pair \$14.95

EXHAUST HEADER SYSTEMS

- INCREASE HORSEPOWER
- ELIMINATE BACK PRESSURE
- INCREASES SPEED
- BETTER PERFORMANCE AND GAS MILEAGE
- REDUCES POWER THROB
- Meets resisting Point finish

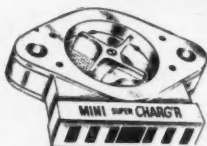
These sets are the most efficient and finest made—as designed and constructed to—
• Increase Horsepower at Least 10%
• Eliminate BACK PRESSURE
• Give Higher Top Speed & Better Idling
• More Miles per Gall. Smooth Performance
• Precision Built for Easy Installation
• Lenses in every way because they are—
• Constructed of Heavy Gauge Steel.
• Designed with smoother curves for easy flow of exhaust.
• Ground flanges for perfect alignment and leakproof installation.
You can install this set in less time because it is made with special longed holes for easy adjustment. Check our low prices—Order Now!
ALL HEADER SETS CONSISTS OF:
• Dual Side Tail Pipe • Pair Headers • • Clamp Set • Pair Extensions •
• Easy-to-follow instructions
Choice of Headers without Mufflers, or with 2 or 3 glass packed mufflers.
• Chevrolet & Buick only 1 header & extension & includes built-in heat riser with twin equalizing tubes.
No. 200 (Buick, 200) Pa. 201 (Buick, 201) Pa. 270 (Ford, 270) Pa. 271 (Ford, 271) Pa. 272 (Ford, 272) Pa. 273 (Ford, 273) Pa. 274 (Ford, 274) Pa. 275 (Ford, 275) Pa. 276 (Ford, 276) Pa. 277 (Ford, 277) Pa. 278 (Ford, 278) Pa. 279 (Ford, 279) Pa. 280 (Ford, 280) Pa. 281 (Ford, 281) Pa. 282 (Ford, 282) Pa. 283 (Ford, 283) Pa. 284 (Ford, 284) Pa. 285 (Ford, 285) Pa. 286 (Ford, 286) Pa. 287 (Ford, 287) Pa. 288 (Ford, 288) Pa. 289 (Ford, 289) Pa. 290 (Ford, 290) Pa. 291 (Ford, 291) Pa. 292 (Ford, 292) Pa. 293 (Ford, 293) Pa. 294 (Ford, 294) Pa. 295 (Ford, 295) Pa. 296 (Ford, 296) Pa. 297 (Ford, 297) Pa. 298 (Ford, 298) Pa. 299 (Ford, 299) Pa. 300 (Ford, 300) Pa. 301 (Ford, 301) Pa. 302 (Ford, 302) Pa. 303 (Ford, 303) Pa. 304 (Ford, 304) Pa. 305 (Ford, 305) Pa. 306 (Ford, 306) Pa. 307 (Ford, 307) Pa. 308 (Ford, 308) Pa. 309 (Ford, 309) Pa. 310 (Ford, 310) Pa. 311 (Ford, 311) Pa. 312 (Ford, 312) Pa. 313 (Ford, 313) Pa. 314 (Ford, 314) Pa. 315 (Ford, 315) Pa. 316 (Ford, 316) Pa. 317 (Ford, 317) Pa. 318 (Ford, 318) Pa. 319 (Ford, 319) Pa. 320 (Ford, 320) Pa. 321 (Ford, 321) Pa. 322 (Ford, 322) Pa. 323 (Ford, 323) Pa. 324 (Ford, 324) Pa. 325 (Ford, 325) Pa. 326 (Ford, 326) Pa. 327 (Ford, 327) Pa. 328 (Ford, 328) Pa. 329 (Ford, 329) Pa. 330 (Ford, 330) Pa. 331 (Ford, 331) Pa. 332 (Ford, 332) Pa. 333 (Ford, 333) Pa. 334 (Ford, 334) Pa. 335 (Ford, 335) Pa. 336 (Ford, 336) Pa. 337 (Ford, 337) Pa. 338 (Ford, 338) Pa. 339 (Ford, 339) Pa. 340 (Ford, 340) Pa. 341 (Ford, 341) Pa. 342 (Ford, 342) Pa. 343 (Ford, 343) Pa. 344 (Ford, 344) Pa. 345 (Ford, 345) Pa. 346 (Ford, 346) Pa. 347 (Ford, 347) Pa. 348 (Ford, 348) Pa. 349 (Ford, 349) Pa. 350 (Ford, 350) Pa. 351 (Ford, 351) Pa. 352 (Ford, 352) Pa. 353 (Ford, 353) Pa. 354 (Ford, 354) Pa. 355 (Ford, 355) Pa. 356 (Ford, 356) Pa. 357 (Ford, 357) Pa. 358 (Ford, 358) Pa. 359 (Ford, 359) Pa. 360 (Ford, 360) Pa. 361 (Ford, 361) Pa. 362 (Ford, 362) Pa. 363 (Ford, 363) Pa. 364 (Ford, 364) Pa. 365 (Ford, 365) Pa. 366 (Ford, 366) Pa. 367 (Ford, 367) Pa. 368 (Ford, 368) Pa. 369 (Ford, 369) Pa. 370 (Ford, 370) Pa. 371 (Ford, 371) Pa. 372 (Ford, 372) Pa. 373 (Ford, 373) Pa. 374 (Ford, 374) Pa. 375 (Ford, 375) Pa. 376 (Ford, 376) Pa. 377 (Ford, 377) Pa. 378 (Ford, 378) Pa. 379 (Ford, 379) Pa. 380 (Ford, 380) Pa. 381 (Ford, 381) Pa. 382 (Ford, 382) Pa. 383 (Ford, 383) Pa. 384 (Ford, 384) Pa. 385 (Ford, 385) Pa. 386 (Ford, 386) Pa. 387 (Ford, 387) Pa. 388 (Ford, 388) Pa. 389 (Ford, 389) Pa. 390 (Ford, 390) Pa. 391 (Ford, 391) Pa. 392 (Ford, 392) Pa. 393 (Ford, 393) Pa. 394 (Ford, 394) Pa. 395 (Ford, 395) Pa. 396 (Ford, 396) Pa. 397 (Ford, 397) Pa. 398 (Ford, 398) Pa. 399 (Ford, 399) Pa. 400 (Ford, 400) Pa. 401 (Ford, 401) Pa. 402 (Ford, 402) Pa. 403 (Ford, 403) Pa. 404 (Ford, 404) Pa. 405 (Ford, 405) Pa. 406 (Ford, 406) Pa. 407 (Ford, 407) Pa. 408 (Ford, 408) Pa. 409 (Ford, 409) Pa. 410 (Ford, 410) Pa. 411 (Ford, 411) Pa. 412 (Ford, 412) Pa. 413 (Ford, 413) Pa. 414 (Ford, 414) Pa. 415 (Ford, 415) Pa. 416 (Ford, 416) Pa. 417 (Ford, 417) Pa. 418 (Ford, 418) Pa. 419 (Ford, 419) Pa. 420 (Ford, 420) Pa. 421 (Ford, 421) Pa. 422 (Ford, 422) Pa. 423 (Ford, 423) Pa. 424 (Ford, 424) Pa. 425 (Ford, 425) Pa. 426 (Ford, 426) Pa. 427 (Ford, 427) Pa. 428 (Ford, 428) Pa. 429 (Ford, 429) Pa. 430 (Ford, 430) Pa. 431 (Ford, 431) Pa. 432 (Ford, 432) Pa. 433 (Ford, 433) Pa. 434 (Ford, 434) Pa. 435 (Ford, 435) Pa. 436 (Ford, 436) Pa. 437 (Ford, 437) Pa. 438 (Ford, 438) Pa. 439 (Ford, 439) Pa. 440 (Ford, 440) Pa. 441 (Ford, 441) Pa. 442 (Ford, 442) Pa. 443 (Ford, 443) Pa. 444 (Ford, 444) Pa. 445 (Ford, 445) Pa. 446 (Ford, 446) Pa. 447 (Ford, 447) Pa. 448 (Ford, 448) Pa. 449 (Ford, 449) Pa. 450 (Ford, 450) Pa. 451 (Ford, 451) Pa. 452 (Ford, 452) Pa. 453 (Ford, 453) Pa. 454 (Ford, 454) Pa. 455 (Ford, 455) Pa. 456 (Ford, 456) Pa. 457 (Ford, 457) Pa. 458 (Ford, 458) Pa. 459 (Ford, 459) Pa. 460 (Ford, 460) Pa. 461 (Ford, 461) Pa. 462 (Ford, 462) Pa. 463 (Ford, 463) Pa. 464 (Ford, 464) Pa. 465 (Ford, 465) Pa. 466 (Ford, 466) Pa. 467 (Ford, 467) Pa. 468 (Ford, 468) Pa. 469 (Ford, 469) Pa. 470 (Ford, 470) Pa. 471 (Ford, 471) Pa. 472 (Ford, 472) Pa. 473 (Ford, 473) Pa. 474 (Ford, 474) Pa. 475 (Ford, 475) Pa. 476 (Ford, 476) Pa. 477 (Ford, 477) Pa. 478 (Ford, 478) Pa. 479 (Ford, 479) Pa. 480 (Ford, 480) Pa. 481 (Ford, 481) Pa. 482 (Ford, 482) Pa. 483 (Ford, 483) Pa. 484 (Ford, 484) Pa. 485 (Ford, 485) Pa. 486 (Ford, 486) Pa. 487 (Ford, 487) Pa. 488 (Ford, 488) Pa. 489 (Ford, 489) Pa. 490 (Ford, 490) Pa. 491 (Ford, 491) Pa. 492 (Ford, 492) Pa. 493 (Ford, 493) Pa. 494 (Ford, 494) Pa. 495 (Ford, 495) Pa. 496 (Ford, 496) Pa. 497 (Ford, 497) Pa. 498 (Ford, 498) Pa. 499 (Ford, 499) Pa. 500 (Ford, 500) Pa. 501 (Ford, 501) Pa. 502 (Ford, 502) Pa. 503 (Ford, 503) Pa. 504 (Ford, 504) Pa. 505 (Ford, 505) Pa. 506 (Ford, 506) Pa. 507 (Ford, 507) Pa. 508 (Ford, 508) Pa. 509 (Ford, 509) Pa. 510 (Ford, 510) Pa. 511 (Ford, 511) Pa. 512 (Ford, 512) Pa. 513 (Ford, 513) Pa. 514 (Ford, 514) Pa. 515 (Ford, 515) Pa. 516 (Ford, 516) Pa. 517 (Ford, 517) Pa. 518 (Ford, 518) Pa. 519 (Ford, 519) Pa. 520 (Ford, 520) Pa. 521 (Ford, 521) Pa. 522 (Ford, 522) Pa. 523 (Ford, 523) Pa. 524 (Ford, 524) Pa. 525 (Ford, 525) Pa. 526 (Ford, 526) Pa. 527 (Ford, 527) Pa. 528 (Ford, 528) Pa. 529 (Ford, 529) Pa. 530 (Ford, 530) Pa. 531 (Ford, 531) Pa. 532 (Ford, 532) Pa. 533 (Ford, 533) Pa. 534 (Ford, 534) Pa. 535 (Ford, 535) Pa. 536 (Ford, 536) Pa. 537 (Ford, 537) Pa. 538 (Ford, 538) Pa. 539 (Ford, 539) Pa. 540 (Ford, 540) Pa. 541 (Ford, 541) Pa. 542 (Ford, 542) Pa. 543 (Ford, 543) Pa. 544 (Ford, 544) Pa. 545 (Ford, 545) Pa. 546 (Ford, 546) Pa. 547 (Ford, 547) Pa. 548 (Ford, 548) Pa. 549 (Ford, 549) Pa. 550 (Ford, 550) Pa. 551 (Ford, 551) Pa. 552 (Ford, 552) Pa. 553 (Ford, 553) Pa. 554 (Ford, 554) Pa. 555 (Ford, 555) Pa. 556 (Ford, 556) Pa. 557 (Ford, 557) Pa. 558 (Ford, 558) Pa. 559 (Ford, 559) Pa. 560 (Ford, 560) Pa. 561 (Ford, 561) Pa. 562 (Ford, 562) Pa. 563 (Ford, 563) Pa. 564 (Ford, 564) Pa. 565 (Ford, 565) Pa. 566 (Ford, 566) Pa. 567 (Ford, 567) Pa. 568 (Ford, 568) Pa. 569 (Ford, 569) Pa. 570 (Ford, 570) Pa. 571 (Ford, 571) Pa. 572 (Ford, 572) Pa. 573 (Ford, 573) Pa. 574 (Ford, 574) Pa. 575 (Ford, 575) Pa. 576 (Ford, 576) Pa. 577 (Ford, 577) Pa. 578 (Ford, 578) Pa. 579 (Ford, 579) Pa. 580 (Ford, 580) Pa. 581 (Ford, 581) Pa. 582 (Ford, 582) Pa. 583 (Ford, 583) Pa. 584 (Ford, 584) Pa. 585 (Ford, 585) Pa. 586 (Ford, 586) Pa. 587 (Ford, 587) Pa. 588 (Ford, 588) Pa. 589 (Ford, 589) Pa. 590 (Ford, 590) Pa. 591 (Ford, 591) Pa. 592 (Ford, 592) Pa. 593 (Ford, 593) Pa. 594 (Ford, 594) Pa. 595 (Ford, 595) Pa. 596 (Ford, 596) Pa. 597 (Ford, 597) Pa. 598 (Ford, 598) Pa. 599 (Ford, 599) Pa. 600 (Ford, 600) Pa. 601 (Ford, 601) Pa. 602 (Ford, 602) Pa. 603 (Ford, 603) Pa. 604 (Ford, 604) Pa. 605 (Ford, 605) Pa. 606 (Ford, 606) Pa. 607 (Ford, 607) Pa. 608 (Ford, 608) Pa. 609 (Ford, 609) Pa. 610 (Ford, 610) Pa. 611 (Ford, 611) Pa. 612 (Ford, 612) Pa. 613 (Ford, 613) Pa. 614 (Ford, 614) Pa. 615 (Ford, 615) Pa. 616 (Ford, 616) Pa. 617 (Ford, 617) Pa. 618 (Ford, 618) Pa. 619 (Ford, 619) Pa. 620 (Ford, 620) Pa. 621 (Ford, 621) Pa. 622 (Ford, 622) Pa. 623 (Ford, 623) Pa. 624 (Ford, 624) Pa. 625 (Ford, 625) Pa. 626 (Ford, 626) Pa. 627 (Ford, 627) Pa. 628 (Ford, 628) Pa. 629 (Ford, 629) Pa. 630 (Ford, 630) Pa. 631 (Ford, 631) Pa. 632 (Ford, 632) Pa. 633 (Ford, 633) Pa. 634 (Ford, 634) Pa. 635 (Ford, 635) Pa. 636 (Ford, 636) Pa. 637 (Ford, 637) Pa. 638 (Ford, 638) Pa. 639 (Ford, 639) Pa. 640 (Ford, 640) Pa. 641 (Ford, 641) Pa. 642 (Ford, 642) Pa. 643 (Ford, 643) Pa. 644 (Ford, 644) Pa. 645 (Ford, 645) Pa. 646 (Ford, 646) Pa. 647 (Ford, 647) Pa. 648 (Ford, 648) Pa. 649 (Ford, 649) Pa. 650 (Ford, 650) Pa. 651 (Ford, 651) Pa. 652 (Ford, 652) Pa. 653 (Ford, 653) Pa. 654 (Ford, 654) Pa. 655 (Ford, 655) Pa. 656 (Ford, 656) Pa. 657 (Ford, 657) Pa. 658 (Ford, 658) Pa. 659 (Ford, 659) Pa. 660 (Ford, 660) Pa. 661 (Ford, 661) Pa. 662 (Ford, 662) Pa. 663 (Ford, 663) Pa. 664 (Ford, 664) Pa. 665 (Ford, 665) Pa. 666 (Ford, 666) Pa. 667 (Ford, 667) Pa. 668 (Ford, 668) Pa. 669 (Ford, 669) Pa. 670 (Ford, 670) Pa. 671 (Ford, 671) Pa. 672 (Ford, 672) Pa. 673 (Ford, 673) Pa. 674 (Ford, 674) Pa. 675 (Ford, 675) Pa. 676 (Ford, 676) Pa. 677 (Ford, 677) Pa. 678 (Ford, 678) Pa. 679 (Ford, 679) Pa. 680 (Ford, 680) Pa. 681 (Ford, 681) Pa. 682 (Ford, 682) Pa. 683 (Ford, 683) Pa. 684 (Ford, 684) Pa. 685 (Ford, 685) Pa. 686 (Ford, 686) Pa. 687 (Ford, 687) Pa. 688 (Ford, 688) Pa. 689 (Ford, 689) Pa. 690 (Ford, 690) Pa. 691 (Ford, 691) Pa. 692 (Ford, 692) Pa. 693 (Ford, 693) Pa. 694 (Ford, 694) Pa. 695 (Ford, 695) Pa. 696 (Ford, 696) Pa. 697 (Ford, 697) Pa. 698 (Ford, 698) Pa. 699 (Ford, 699) Pa. 700 (Ford, 700) Pa. 701 (Ford, 701) Pa. 702 (Ford, 702) Pa. 703 (Ford, 703) Pa. 704 (Ford, 704) Pa. 705 (Ford, 705) Pa. 706 (Ford, 706) Pa. 707 (Ford, 707) Pa. 708 (Ford, 708) Pa. 709 (Ford, 709) Pa. 710 (Ford, 710) Pa. 711 (Ford, 711) Pa. 712 (Ford, 712) Pa. 713 (Ford, 713) Pa. 714 (Ford, 714) Pa. 715 (Ford, 715) Pa. 716 (Ford, 716) Pa. 717 (Ford, 717) Pa. 718 (Ford, 718) Pa. 719 (Ford, 719) Pa. 720 (Ford, 720) Pa. 721 (Ford, 721) Pa. 722 (Ford, 722) Pa. 723 (Ford, 723) Pa. 724 (Ford, 724) Pa. 725 (Ford, 725) Pa. 726 (Ford, 726) Pa. 727 (Ford, 727) Pa. 728 (Ford, 728) Pa. 729 (Ford, 729) Pa. 730 (Ford, 730) Pa. 731 (Ford, 731) Pa. 732 (Ford, 732) Pa. 733 (Ford, 733) Pa. 734 (Ford, 734) Pa. 735 (Ford, 735) Pa. 736 (Ford, 736) Pa. 737 (Ford, 737) Pa. 738 (Ford, 738) Pa. 739 (Ford, 739) Pa. 740 (Ford, 740) Pa. 741 (Ford, 741) Pa. 742 (Ford, 742) Pa. 743 (Ford, 743) Pa. 744 (Ford, 744) Pa. 745 (Ford, 745) Pa. 746 (Ford, 746) Pa. 747 (Ford, 747) Pa. 748 (Ford, 748) Pa. 749 (Ford, 749) Pa. 750 (Ford, 750) Pa. 751 (Ford, 751) Pa. 752 (Ford, 752) Pa. 753 (Ford, 753) Pa. 754 (Ford, 754) Pa. 755 (Ford, 755) Pa. 756 (Ford, 756) Pa. 757 (Ford, 757) Pa. 758 (Ford, 758) Pa. 759 (Ford, 759) Pa. 760 (Ford, 760) Pa. 761 (Ford, 761) Pa. 762 (Ford, 762) Pa. 763 (Ford, 763) Pa. 764 (Ford, 764) Pa. 765 (Ford, 765) Pa. 766 (Ford, 766) Pa. 767 (Ford, 767) Pa. 768 (Ford, 768) Pa. 769 (Ford, 769) Pa. 770 (Ford, 770) Pa. 771 (Ford, 771) Pa. 772 (Ford, 772) Pa. 773 (Ford, 773) Pa. 774 (Ford, 774) Pa. 775 (Ford, 775) Pa. 776 (Ford, 776) Pa. 777 (Ford, 777) Pa. 778 (Ford, 778) Pa. 779 (Ford, 779) Pa. 780 (Ford, 780) Pa. 781 (Ford, 781) Pa. 782 (Ford, 782) Pa. 783 (Ford, 783) Pa. 784 (Ford, 784) Pa. 785 (Ford, 785) Pa. 786 (Ford, 786) Pa. 787 (Ford, 787) Pa. 788 (Ford, 788) Pa. 789 (Ford, 789) Pa. 790 (Ford, 790) Pa. 791 (Ford, 791) Pa. 792 (Ford, 792) Pa. 793 (Ford, 793) Pa. 794 (Ford, 794) Pa. 795 (Ford, 795) Pa. 796 (Ford, 796) Pa. 797 (Ford, 797) Pa. 798 (Ford, 798) Pa. 799 (Ford, 799) Pa. 800 (Ford, 800) Pa. 801 (Ford, 801) Pa. 802 (Ford, 802) Pa. 803 (Ford, 803) Pa. 804 (Ford, 804) Pa. 805 (Ford, 805) Pa. 806 (Ford, 806) Pa. 807 (Ford, 807) Pa. 808 (Ford, 808) Pa. 809 (Ford, 809) Pa. 810 (Ford, 810) Pa. 811 (Ford, 811) Pa. 812 (Ford, 812) Pa. 813 (Ford, 813) Pa. 814 (Ford, 814) Pa. 815 (Ford, 815) Pa. 816 (Ford, 816) Pa. 817 (Ford, 817) Pa. 818 (Ford, 818) Pa. 819 (Ford, 819) Pa. 820 (Ford, 820) Pa. 821 (Ford, 821) Pa. 822 (Ford, 822) Pa. 823 (Ford, 823) Pa. 824 (Ford, 824) Pa. 825 (Ford, 825) Pa. 826 (Ford, 826) Pa. 827 (Ford, 827) Pa. 828 (Ford, 828) Pa. 829 (Ford, 829) Pa. 830 (Ford, 830) Pa. 831 (Ford, 831) Pa. 832 (Ford, 832) Pa. 833 (Ford, 833) Pa. 834 (Ford, 834) Pa. 835 (Ford, 835) Pa. 836 (Ford, 836) Pa. 837 (Ford, 837) Pa. 838 (Ford, 838) Pa. 839 (Ford, 839) Pa. 840 (Ford, 840) Pa. 841 (Ford, 841) Pa. 842 (Ford, 842) Pa. 843 (Ford, 843) Pa. 844 (Ford, 844) Pa. 845 (Ford, 845) Pa. 846 (Ford, 846) Pa. 847 (Ford, 847) Pa. 848 (Ford, 848) Pa. 849 (Ford, 849) Pa. 850 (Ford, 850) Pa. 851 (Ford, 851) Pa. 852 (Ford, 852) Pa. 853 (Ford, 853) Pa. 854 (Ford, 854) Pa. 855 (Ford, 855) Pa. 856 (Ford, 856) Pa. 857 (Ford, 857) Pa. 858 (Ford, 858) Pa. 859 (Ford, 859) Pa. 860 (Ford, 860) Pa. 861 (Ford, 861) Pa. 862 (Ford, 862) Pa. 863 (Ford, 863) Pa. 864 (Ford, 864) Pa. 865 (Ford, 865) Pa. 866 (Ford, 866) Pa. 867 (Ford, 867) Pa. 868 (Ford, 868) Pa. 869 (Ford, 869) Pa. 870 (Ford, 870) Pa. 871 (Ford, 871) Pa. 872 (Ford, 872) Pa. 873 (Ford, 873) Pa. 874 (Ford, 874) Pa. 875 (Ford, 875) Pa. 876 (Ford, 876) Pa. 877 (Ford, 877) Pa. 878 (Ford, 878) Pa. 879 (Ford, 879) Pa. 880 (Ford, 880) Pa. 881 (Ford, 881) Pa. 882 (Ford, 882) Pa. 883 (Ford, 883) Pa. 884 (Ford, 884) Pa. 885 (Ford, 885) Pa. 886 (Ford, 886) Pa. 887 (Ford,

NEW LOW PRICES... NEW ITEMS!

SEE PREVIOUS
3 PAGES

GET MORE POWER ON LESS GAS

WITH THE
**- MINI -
SUPER CHARGER**



- UP TO 20% MORE MILES PER GALLON WITH GREATLY INCREASED HORSEPOWER
- LONGER ENGINE LIFE
- FASTER ACCELERATION
- BETTER PERFORMANCE

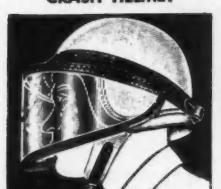
NEW... patented automotive improvement "Supercharger" motor performance... boosts power output and gives greatly increased gas economy... BY INCREASING AIR-FUEL CHARGE EFFICIENCY.

MINISuperCharger consists of a revolving impeller "blower" & automatic "breather" valve which mixes an increased volume of air to the fuel charge with whirlwind force. This atomizes and expands the gas molecules so that the improved mixture enters the cylinders in a more powerful highly explosive state. The MINISuperCharger eliminates over-rich mixtures & fuel waste. Better, cleaner combustion is obtained resulting in reduced "ping", less oil dilution, less valve troubles and longer engine life. Eliminates "Vapor lock". Precision built of bronze and aluminum. Easily installed. Satisfaction Guaranteed. Specify year, make, model of car or truck and make and model oil carburetor.

Type Carburetors

No. Throat	Each
311—2 Belt single POSTPAID	\$ 9.95
312—3 Belt dual POSTPAID	11.95
313—4 Barrel Quad POSTPAID	15.95

FIBERGLASS CRASH HELMET



For Visor and Windbreaker Sold Separately See Below.
Approved—Full Protection
50% more safety—25% less weight
For use in all fields of automobile and motorcycle racing.

MAXIMUM PROTECTION
Covers all over the head—Covers the base of the skull and the temples—the most vulnerable area. Has adequate ventilation.
Shell is constructed of reinforced fiber glass—50% more impact strength. 25% less weight.
Shell is lined with German plastic foam, this foam has 3 times the shock absorbing qualities of ordinary foam rubber.
Edge of the helmet is covered with foam rubber and soft leather. Chin strap fastens with buckle.
Guaranteed not to deteriorate from acid or perspiration. Comes in 3 sizes: Small, Medium, Large. With two inner adj. for size.

How Size Wanted.

No. 624 POSTPAID \$33.95

VISOR & WINDBREAKER

Full Contoured Face Protection.
PROTECTS COMPLETE FACE FROM Wind, Dust, Dirt, etc. Approved for competition.
Comfortable to use. Replaces old style goggles—will not steam up.
Visor will fit and adjust to any full protection or Cromwell type crash helmet.
Made of durable optically clear vinylite plastic with flexible frame encased in leather. No. 625

\$7.95

For 1953 FORD—Latest 1956 Style Wrap-Around Chrome Plated Custom Grille Bar



Custom Styled—Custom Fit—Given Wide Low, Clean Look. Gives Your Car That 1956 Look.
• Wraps around side of fenders.
• Replaces original center lower and right and left bars.
• Easily installed—No alterations necessary.
• Gleaming chrome finish.
• Precision engineered for perfect fit.
• Heavy gauge steel.

No. 619 — Each \$22.50

Chrome-Nickel Electro PLATING KIT



Removes rust spots and blemishes, restores original luster. With this kit you can do your own chrome or nickel plating easily and quickly. Re-plating any chrome nickel trim, bumpers, door handles, grill work and many other plated items on car or in the home. Easy to use. Simply dip brush in solution and brush on metal. Operates on 2 Panel batteries. Restore original beauty of chrome and nickel finish. Good for retouching rust spots. Kit complete with electric brush and solution and instruction.
No. 618 — Each POSTPAID \$3.95

RACING "Slick" TIRES



Choice of Flat Slicks for hard surface and Deep treading or Grooved for Dirt Tracks.



Note the 2 to 3 inch extra width of the racing tire compared to a regular tire. That extra traction counts in racing.

Why waste your high speed torque with ordinary tread? Get a real traction "Slick" with these racing "Slicks". These extra width (2 to 3 inches wider than regular tires) flat surface (no grooves) slicks or grooved slicks give you terrific starting "bite" and makes your horsepower pay off. Slightly higher tread on outside for corners. These tires are specially made for racing from sound, thoroughly inspected carcasses, capped with heavy duty high speed racing rubber. Guaranteed workmanlike. They fit your regular wheels. Choice of flat slicks for hard surface and deep treading or dirt track slicks which are specially designed tread grooved with a 30-60° angle for gripping on dirt tracks. Grooves carry over side for extra grip on corners. Flat Slick Grooved Dirt Track Tires.

Size	Each	Each
4.50-16	59¢	\$16.95
7.00-15	59¢	16.95
7.10-15	62¢	16.95
7.60-15	62¢	21.45
8.00-15	62¢	24.95
8.20-15	62¢	24.95
7.00-16	62¢	24.95
7.60-16	62¢	24.95

COFFEE BAR FOR YOUR CAR



Enjoy Your Favorite Beverage While Driving. Piping Hot coffee, tea, milk, chocolate, made by anyone in your car, truck, taxi or bus WHILE DRIVING ALONG!
No holes to drill. Fits any car or truck. Simply plug into cigarette lighter. "Coffee Bar" consists of holding bracket, cup heating unit with sealing cover, spillproof plastic containers for liquids, 3 clear plastic containers with lock caps, and mug-type aluminum drinking cup.
No. 366—POSTPAID, each \$5.95
State 6" or 12" VOLT.

White Wall RUBBER TIRE DISCS



The new all white sidewall fits all cars and trucks. Has appearance and wearing qualities of regular tire. Easily installed with full instructions. Needs no cementing and fits snugly at all times. Can be taken off and re-used on different cars.
No. 441 — Set 4—Size 590/15 to 710/15 Each Set POSTPAID \$9.95
No. 442 — Set 4—Size 600/16 to 650/16 Each Set POSTPAID \$9.95
No. 443 — Set 4—Size 760/15 to 820/15 Each Set POSTPAID \$9.95

DYNO-METER Performance Indicator and Driving Guide

- Checks Instantly:—
- Read Horsepower
- Tests Acceleration
- Shows Best Brand Gas
- Trouble Shoots
- Measures Road Grades
- Condition of Brakes
- Save on Gas & Repairs
- As You Drive



Amazing new "DYNO-METER" Car Test Instrument (not a vacuum gauge) mounts on dash to provide a quick, easy way of making your own road tests for peak performance, economy and safety. The "DYNO-METER" gives continuous readings on road horsepower, acceleration, hill climbing ability, road grades, condition of brakes, wheel alignment, engine tune, tractive resistance, etc. Helps save on gas, tires, and repairs by leaving on a performance analyzer and engine "trouble shooter"—shows most economical driving speeds and best cruising speed range, makes comparison tests of fuel brands and determines best gas for your car. Checks engine efficiency before and after service work, shows value of a tune up, measures performance of all speeds. Also valuable for comparing performance when buying a used or new car.

Drive By Instrument Like "Economy Run" Winners
U. S. "Economy Run" winners have taught us that it is NOT the car and NOT the gasoline that permits such phenomenal high-mileage from ordinary passenger cars—IT'S THE DRIVING TECHNIQUE THAT MAKES THE BIG DIFFERENCE. Now you can easily put this same "know how" to work for you... Cut gas consumption and operating costs by as much as 30%. The amazing "DYNO-METER" shows you how to get all the performance and mileage your car can deliver—immediately and for years to come! It lasts a lifetime—transfers from one car to next. FREE "E2" INSTRUCTIONS INCLUDED.

FOR ALL CARS & TRUCKS
No. 499 — POSTPAID Each \$3.95

New! CAR PLAQUES

Thick cast aluminum, beautifully polished, rust proof. Approximately 9 inches long, 5 inches wide, full 3/16 inch thick. Can be placed anywhere on car—Swing In, Mount Em, Paint Em. Choose your favorite here:



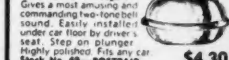
Specify Plaque wanted.
No. 453 Each POSTPAID \$2.98

New! 4 Prop Type CHROME WHEEL DISC



This gleaming chrome beauty reflects the new trend in propeller-type styling. Precision made for perfect fit and easy installation. Fits all 15 inch wheels.
No. 602 — Set of 4 — \$26.95

BERMUDA CLANGING BELL



It's the New "Rag"!
Gives a most amusing and commanding two-tone bell sound. Easily installed under car floor by driver's seat. Step on plunger. Highly polished. Fits any car!
Stock No. 49—POSTPAID \$4.30

Overhead Valve Silencer Pad



Silences clicking noises. Lubricates valve rocker arms. Protects against dirt and condensation. Easy to install. State year, make and model of car.
No. 358—Fits Buick 36-52; Chev. 4, 30-56; Ford 6, 52-56; GMC, Willys 6, 51-54. POSTPAID, Each \$2.69
No. 351—Fits V8 Cad. Olds 49-56; Mercury 54-56; Lincoln 53-56; Buick 53-56; Chev. 59-56; Ford 54-56; DeSoto 1955-56 V8; Plymouth 1955-56 V8; Pontiac 1955-56 V8; Stude 1951-56 V8.
POSTPAID, Per Pair \$4.49

USE THIS HANDY ORDER FORM — MAIL TODAY!

J.C. WHITNEY & CO. 1917-024 Archer Ave., Chicago 16, Ill. Please ship following order on money-back guarantee of satisfaction:

Quantity	Stock No.	Description	Price

I Enclose \$_____ to cover payment in full (or 25% deposit if C.O.D.)
(NOTE: WE PAY POSTAGE on items marked POSTPAID when payment accompanies order. You pay shipping charges on items not marked POSTPAID. If C.O.D. order, enclose at least 25% deposit, pay balance plus shipping charges upon delivery.)

Name _____
STATE — My car is a _____ Year, _____ Model, _____ No. of Cyl. _____
Address _____
City _____ Zone _____ State _____

☐ Catalog sent Free with your order. Check here if you want Catalog only — Send 25c.

Last Minute Releases!

FREE All New 1956 Edition CATALOG of AUTO ACCESSORIES & PARTS

Special Saves You 1: 50%

Save Money Buying Direct by Mail From Whitney! Our tremendous buying power and large volume enables us to pass important savings on to you in the form of rock-bottom prices. Savings total up to 50%. We stock over 60,000 items... anything you need in the automotive line you'll find listed in the new Whitney catalog, ready for immediate shipment. Your complete satisfaction guaranteed on every order or your money back.

Catalog is FREE with any order for items selected from this advertisement. If you want the catalog only, send 25c to cover part of handling and mailing cost (refunded on your first order).

J.C. WHITNEY & CO. 1917-024 Archer Ave. Chicago 16, Ill.

60,000 Items

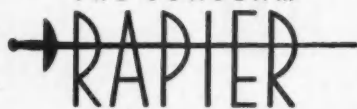


Mail Coupon Today!



A new **THRUST** on the highway

THE SUNBEAM



COUPE DE SPORT

An entirely new automobile. A car that brings a new word to the English language — "accel-egance!" Wait till you feel its performance, but don't wait to write for a catalog and the name of your nearest dealer.

ROOTES
MOTORS INC.

505 PARK AVENUE, NEW YORK, N. Y.
9830 W. PICO BLVD., LOS ANGELES, CALIF.

HiTORK

"Balanced
Traction"
DIFFERENTIAL



- Greater Traction-Automatically
- Eliminates Wheel Spin
- Increases Speed, Acceleration

HI TORK gives a "geared-to-the-road" drive by utilizing all available traction at both rear wheels. Simple installation—Models for most cars—T-Bird, Ford, Mercury, Lincoln, Chev., Plymouth, Dodge, DeSoto, Chrysler, Hudson, Willys, Studebaker, Jaguar—Available at \$99.50.



Literature on request; state make, model and year of your car.

LYETH ENGINEERING
P.O. Box 3841
12859 E. Eight Mile Rd.
Detroit 5, Michigan

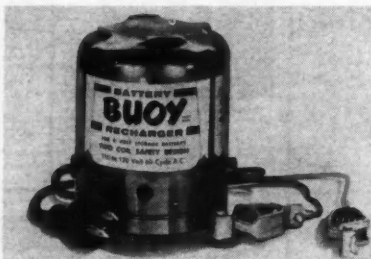
motoring accessories



URANI-TECTOR KIT for use by both amateur and professional prospectors. Simple to use, contains all materials needed to prospect for uranium, 4 samples of uranium from commercial mines and chemicals for appraising uranium. Ideal for prospector, vacationer, hunter, fisherman. \$8.49 ppd. CMG Industries, Box 611, Laramie, Wyo.



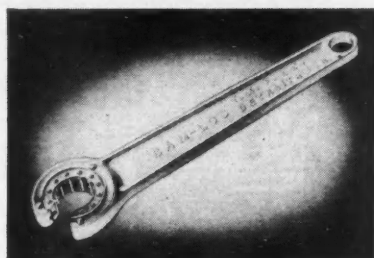
ZINC CHROMATE PRIMER in an aerosol spray container is the newest of 20 items produced by Krylon, Inc. A near necessity in bonding paint to metal, containers of this type are useful for hobbies or in body shops when a limited quantity of primer is sufficient. In 12-ounce spray-cans, the zinc chromate is \$1.98 in local stores.



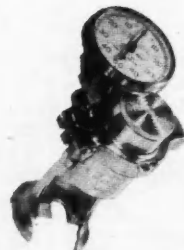
BATTERY BUOY recharger comes in 6- and 12-volt models operating on the induction-coil principle from any 110-volt 60-cycle current source, and shuts itself off when the battery is fully charged. Priced at \$19.95 complete with a bracket for wall mounting. Further details from the Buckeye Stamping Co., 555 Marion Rd., Columbus 7, Ohio.

HOUDAILLE 50-50 ACTION FORD SHOCK ABSORBERS

Ideal for '28-48 Fords. Insures excellent roadability and control at all speeds. Guaranteed for 12,000 miles or 1 year. Just \$10.50 each ppd. Specify Ford model and wheel locations.
PIONEER SHOCK ABSORBER SERVICE
700 N. Prairie Ave., Hawthorne 2, Calif.
Dealer inquiries invited



THE CAM-LOC roller-ratchet wrench should be particularly useful for work involving oil, gas, and brake lines. Designed to work even on badly burled, heavily painted or undercoated nuts, Cam-Loc won't mar chromed fittings. Available in 9 sizes from 3/8 to 1 inch from the TKF Co., Fisher Bldg., Detroit 2.



P & G VALVE GAPPERS offer a time saving, extremely accurate method for measuring valve clearance and discovering faulty hydraulic lifters while adjusting rocker arms. This model (#121) is engineered for Chevy and Pontiac ohv V8s; others available for different gas and diesel engines. P & G Manufacturing, 305 N.E. Russell St., Portland, Ore.



"SLOPPY JOE" slipover seat covers contain no plasticizer and are claimed to be inert chemically. Manufactured of "Visqueen" polyethylene film of high tensile strength, the covers are said to preserve upholstery without damage to existing seat materials. Sizes to fit all car makes and models are available from local accessory stores at \$7.95 a set.

MAGNETIC EYE-GLASS CASE

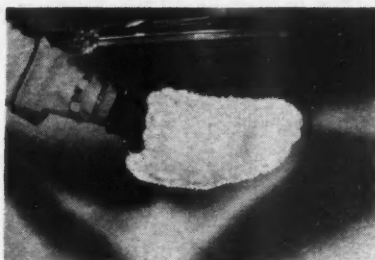
NO MORE FUMBLE
IN GLOVE-BOX
JUMBLE

HANDY
SAFE
CLEAN

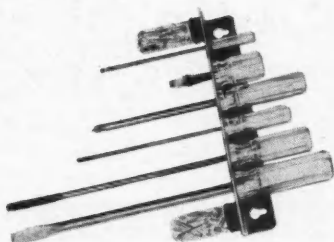
STICKS
TO AUTO
DASH

MAGNETICASE \$1.00 P.O. BOX 33
HOLLYWOOD 46, CALIF.

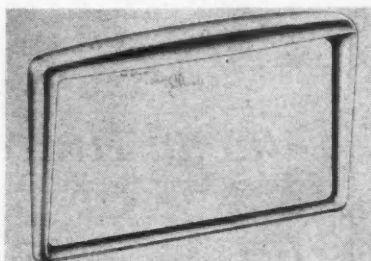
This department is not composed of paid advertising. All items are guaranteed by the manufacturer for immediate refund if you are not satisfied. Claims made herein are those of the manufacturer, and do not constitute an endorsement by MOTOR TREND. When ordering, include sales tax if required by your state.



U-CLEEN-MITT with acrylic pile and cotton wristlet is 100% washable and will not mar the most delicate finishes. Measuring 8 by 7 by 1 inch, the mitt is a handy gadget for do-it-yourself car washers, as well as for windows, furniture, etc. It fits either hand, costs \$1 ppd. from Eisendrath Glove Co., Marinette, Wis.



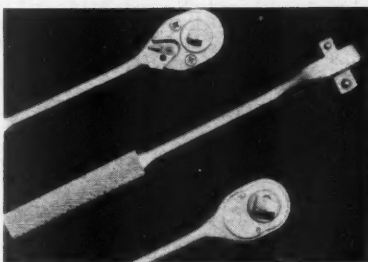
HANDYMAN tool set, a combination 6-piece screwdriver set and metal wall rack, comes with 2 unbreakable vials filled with bright-finish assorted household screws. Included are: heavy-duty mechanic's driver, Phillips-type driver, stubby, thin-blade, and long-blade household drivers. \$1.50 ppd., Terry Products, Box 581, Merrick, N.Y.



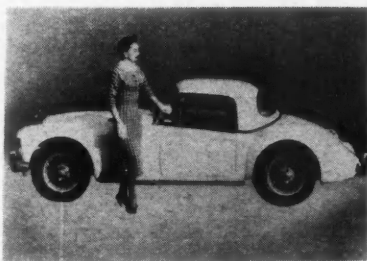
EL DORADO license frame is designed for universal mounting of the standard 6 by 12 inch license plate regardless of mounting hole position and is made of rustproof metal heavily plated with "blue sapphire" chrome. The El Dorado is only one of a varied line of plate holders manufactured by Sutone Corp., and sells for \$2.95 in local stores.



SPEEDOMETER HEAD BEARINGS can be easily oiled with the MC lubricator, which is available in 2 models; 1 for passenger cars and buses, and 1 for trucks and buses. A threaded plastic base screws onto the cable fitting; squeezing the neoprene bulb forces oil into the bearing. Malloy Mfg. Co., 2113 Oak Ridge Ave., Madison, Wis.



DOUBLE DUTY RATCHET with both 1/2- and 3/8-inch drives eliminates the necessity for 2 wrenches and incorporates the best features of both at a reasonable price (\$5.95 ppd.). It's a 10-inch, drop-forged alloy steel wrench with an unusually small head; built to specifications by Proto for the Vogel Tool Co., 11600 W. Pico Blvd., Los Angeles 64.



MG-A AND PORSCHE SPEEDSTER owners can now be fully protected from the elements with this Fiberglas top, featuring a wraparound rear window, stainless-steel gutters, chrome hardware, and a fabric headlining. Other tops available for Jaguar, Austin-Healey, Corvette, and other sports cars from Plasticon, 63 Beacon Place, Pasadena, Calif.

FRONT WHEEL BEARING ADJUSTING WASHERS.
Fords-GM-Most others--Four washers equals one cotter key slot. Use 1, 2, or 3 as needed. 50¢, six.

BALLARD STABILIZER \$2.75, P. P.
Fords-Mercurys-Lincolns '49-'56.
Permanent repair to all loose idler arms, old and new. **GUARANTEED.**
B. and B. SPECIALTY CO.
1718 Hawthorne Houston 6, Texas.

STEAM FANS
LATEST STEAM CAR TRENDS . . .
featured in **LIGHT STEAM POWER** magazine.
Introductory subscription only \$3 per year.
Send for **FREE LIST of BOOKS and PLANS.**
STEAM DEVELOPMENTS
Box 335 D, Staten Island 8, N. Y.

BIG PAY JOBS

for men who qualify in

DIESEL

TRAIN NOW FOR A DIESEL FUTURE

Steady, high-pay jobs await men qualified in Diesel, Tractor, and Heavy Equipment. Are you qualified for job and advancement opportunities in this fast-growing field? You can qualify!

COMPLETE DIESEL COURSE NOW AVAILABLE

If you are ambitious and want to get ahead in this big money field, you'll want to know about the complete Diesel home training course now offered by Interstate Training Service. Covers all phases of operation, repair, service. Easy to master in spare time. No interference with present job. Up-to-the-minute. Regularly revised to cover new developments. We invite comparison of material offered. Advisory placement service for students.

YOU OWE IT TO YOURSELF to investigate Interstate Training Service Diesel Training. Thousands agree it has helped them to better jobs...better pay. It can do the same for you!



WRITE FOR FREE INFORMATION TODAY!

INTERSTATE TRAINING SERVICE
Dept. A-29, Portland 13, Ore.

Please see that I receive FREE 24-page book, "Getting Ahead in Diesel."

NAME _____ AGE _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

MISSILES...

who designs them?

Nike . . . Matador . . . Navajo!
Are they devices of the future?
No, not at all!

The Age of Missiles is here. Giant aviation companies such as Douglas, Convair, Lockheed, Northrop, North American, Hughes and others are setting up or have already established separate Missiles Divisions, staffed with hundreds of engineers and needing hundreds more.

NORTHROP AERONAUTICAL INSTITUTE trains men for a career in Aeronautical Engineering — a career in Aviation's newest development — "Missiles." There is a waiting list for Northrop Graduates. And Northrop prepares you in just two short years. Think what this saving in time can mean to you in dollars saved and extra dollars earned!

COURSES APPROVED FOR VETERANS

Take the first step toward the career of your choice right now.

MAIL COUPON FOR FREE CATALOG

NORTHROP AERONAUTICAL INSTITUTE
1103 W. Arbor Vitae Street, Inglewood 1, California

Please send me immediately the Northrop catalog, employment data, and schedule of class starting dates. I am interested in:

☐ Aeronautical Engineering Technology
☐ Aircraft Maintenance Engineering Technology
☐ Master Aircraft and Engine Mechanic
☐ Jet Engine Overhaul and Maintenance

Name _____ Age _____
Address _____
City _____ Zone _____ State _____
Veterans: Check here ☐ for Special Veteran Training Information.



**we're
sorry...**

that we have not had the production to supply all the demand for Life-Time 50,000 Mile Spark Plugs. New equipment and greatly accelerated production enable us now to make immediate delivery. If you have ordered and your check has been returned, please place your order again. Life-Time Spark Plug Sets may be ordered from this advertisement. We will postpay at regular retail price. Specify make, model and year of car. Set of 6, \$7.14; set of 8, \$9.52.

DISTRIBUTORSHIPS

Some additional distributorships are now available. If you have already written us regarding your area, please contact us again. If you have not written before, please send us an outline of your previous business experience and qualifications.

CONTINENTAL MANUFACTURING CORP.
Washington Blvd. at Motor Ave.
Culver City 129, California



\$ 3.95

Von's Kool Vision DAY N' NITER'S 6 ways better than regular sun glasses!

Light as a feather and optically correct, DAY N' NITER'S are perfect for all outdoor and indoor activity where excessive light is an eye hazard. Anti-glare visor protects eyes from overhead glare; interchangeable dark and amber flip-up lenses for sun and night light; removable temples let DAY N' NITER'S fit on regular glasses.

Only \$3.95 postpaid and guaranteed, with red, blue, or green visor and handsome case. Send check or money order today!

KOOL VISION CO., Box 82-C, Bay City, Mich.
Dealer Inquiries Invited

WARN HUBS for 4-WHEEL DRIVES

Make 2 Vehicles Out of 1!

Over 75,000 satisfied users! Warn Hubs disengage front power train for 2-wheel drive use—stop drag, gear whine, front end shimmy; save gas, gears, tires. Use your 4-wheel drive for any purpose, any time, with Warn Automatic or Locking Hubs. Models for all makes of 4 W.D.s. to 1½ tons at dealers, or write:



WARN MFG. CO., Riverton Box 6864-F4, Seattle 98, Wn.

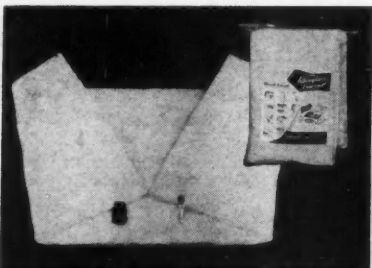
70 MOTOR TREND/APRIL 1956

continued

Motoring Accessories



MAGNETICASE ends all digging thru crowded glove compartments in search of a pair of glasses. This plastic eyeglass case with simulated leather grain has several small magnets enclosed within a pocket and will stick to any iron or steel surface, such as a dashboard, window frame, or steering column. \$1 ppd. from Magneticase, P.O. Box 33, Hollywood 46, Calif.



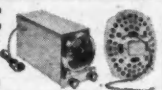
FIBERGLAS INSULATION has the advantages of being efficient, non-inflammable, and easily installed. Complete with adhesive and an applicator brush, kits of this type are available for numerous heat insulation uses and to quiet engine and road noise. Various prices from \$1 to \$15, depending on kit size. Write Fibreglass Evercoat Co., 7220 Vine St., Cincinnati 16, Ohio.



THE PERFECT PET for the automotive enthusiast, especially designed for small "sporty" cars, is now available. Vegetarians will be particularly interested in this 'Hippy' animal which will not eat meat and is not overly affectionate. Damp weather and open cars are nicely suited to its personality. About \$15,000 at your local dealer.

NORDIC CUSTOM RADIOS FOR 1952 TO 56 FORDS

**SUPERHETERODYNE • BIG 6 x 9
INCH SPEAKER • LOW BATTERY
DRAIN • EASY INSTALLATION
PERMEABILITY TUNER**



\$38.00

WRITE FOR LITERATURE

NORDIC RADIO COMPANY • BOX 382 • EVANSTON, ILL.

WELD YOUR WAY AHEAD!

Learn Arc and Gas Welding In Spare Time

Your opportunities are greater when you learn to use this great tool of modern industry. Training in welding opens the door to many key industries. Now you can train at home with UET's practical course. Includes techniques, metallurgy, blueprints, shop practices, other important phases.



Write For FREE Facts! You can follow home-study training with actual shop practice. High school diploma not necessary. Write NOW!

UTILITIES ENGINEERING INSTITUTE
2523 Sheffield Av., Dpt. WAN-1, Chicago 14



LOOK AHEAD



Speed-lite

**200,000
CANDLEPOWER FOR
SAFETY AT HIGH SPEEDS**

Special sealed-beam airplane landing

light unit.

Five times brighter than headlight yet only

5 1/4" dia. by 3 1/2" deep.

May used for mountain and lonely road driving.

Built-in metal glare deflector.

Modern flat pyrex lens.

Aluminum mounting bracket and heavy wiring furnished.

Beautiful chrome-plated finish.

Can be used singly or in pairs. Fit American or Foreign Cars.

Available only from:

CHARLES E. KING & CO.

950 W. CHICAGO AVE. CHICAGO 22, ILL.



Just Say "Charge It"

WITH A . . .

Duncan Hines Signet Club Credit Card

Whether you motor for business or pleasure, your Duncan Hines Signet Club travel credit card will be honored by 2,500 eating and lodging places in all 48 states, Canada, Mexico and the Caribbean. All of these establishments are *Recommended by Duncan Hines*. For complete information without obligation on membership in the Duncan Hines Signet Club, use coupon below.

Duncan Hines Signet Club
408 East State St., Ithaca, N.Y.

Gentlemen: Please send me complete information on membership in the Duncan Hines Signet Club without obligation to me.

Name

Address

City Zone State

SELL 'N' SWAP

Requirements are: copy limit of 25 words (not including name and address); 1st come, 1st served; we reserve the right to edit where necessary; we are not responsible for accuracy of description, although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance and such communications will not be acknowledged. Only one CAR may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc. The charge is \$4 per insertion. If your car is unusual and you have a photo of it suitable for publication, you may submit it with your ad. If we decide to print it there's no cost to you for the car, but we'll have to decide which photos to use. Sorry, no photos can be returned.—Editor

SELL

'41 HUPP Skylark. Cord body 4-dr. sed. Unrestored, fair cond., State inspected. 4 new ww's. Similar to "Airborne Hupp." February Motor Trend, \$600. Aubrey E. Thurston Jr., 4904 Embassy Dr., Richmond 28, Va.

'31 PACKARD 8 town car. Nearly new engine, side-mount, 6 good tires. Needs paint, glass, rear seat & back cushions. \$750. L. T. Hoyt, Rosendale, Wis. JEEPSTER with '54 Oldsmobile engine, automatic trans., 3 to 1 Pontiac rear end. New paint, uph. Royal Master ww's. Perfect. \$1300. George R. Thompson, 2223 S. Dale Mabry, Tampa 9, Fla. Phone: 87-6261.

CORD 810-812 parts. Blower & all parts to convert 810 to Super. Lots of other parts. Name it—I'll tell you price and cond. Roland David, 3305 E. 105th St., Cleveland 4, Ohio.

'15 FORD T rdstr. Orig. showroom cond.; engine & chassis completely o'hauled; guaranteed. 6 new tires, Rocksteel 2-speed rear axle, Rocky Mountain brakes, Hassler shock absorbers, etc. \$1500. G. M. Cohn, 9476 Readcrest Dr., Los Angeles.

CADILLAC Model J-57 rdstr. Completely o'hauled; orig. factory cond. All new parts, new tires, top, paint. All access., inc. motor meter, Westinghouse air shock absorbers, engine tire pump. Guaranteed. \$2250. M. L. Cohn, 1323 Venice Bl., Los Angeles.

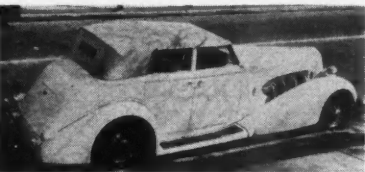
'33 CHEVROLET Master coach. Wire wheels, free wheeling, good tires, insured, ready to drive away. Always good care—mine 21 yrs. \$200. Vaughn H. Chase, 1559 Northland Ave., Lakewood 7, Ohio.

'36 MG-1A wire-wheeled classic, with '51 TD engine & trans. New red paint, tan top. Uph. not completely restored. Best offer. Friedrich P. Forster, 367 Remington St., Bridgeport 10, Conn. Phone: FO 7-7371.

'49 CADILLAC Fleetwood 7-pass. limousine. 19,000 actual chauffeur-driven mi. Spare unused, never driven in winter. Factory-new thruout. Cost \$6000. Best offer. R. Polli, 30 Selye Terr., Rochester 13, N.Y.

'48 LINCOLN CONTINENTAL conv. Dark green, with white top. R & h, ww's, o.d. 7000 mi. on new '54 Olds engine installed in July. Perf. orig. equip.; stored winters. Jack Collins, 1223 S. 16th St., La Crosse, Wis.

'36 DUESENBERG 4-dr. conv. with Bohman-



Schwartz body. Exc. cond. Mrs. D. J. Leavitt, 2715 N. Main St., Dayton, Ohio.

'39 ROLLS-ROYCE Phantom III. 4-dr. sed. Body by Kellner. Mrs. D. J. Leavitt, 2715 N. Main St., Dayton, Ohio.

'23 BUICK cpe. 2nd owner, 40,000 mi. Mechanically excellent, 5 good tires, no dents or rust. New instruments inc. Needs paint, chroming. All letters answered. R. J. Marikonis, 604 N London Ave., Rockford, Ill.

'48 LINCOLN CONTINENTAL cpe. Factory-new '55 Cadillac engine installed by McBar, new Continental trans. & o.d. Exc. cond. thruout, show winner. Accessories work perfectly. Blaine Robrock, 1536 Cherry St., Huntington, Ind. Phone: 336.

'46 LINCOLN 66-H V-12 sed. Exc. cond. thruout; less than 50,000 mi. 7 tires, inc. 4 nearly new ww's. Best offer. A. Lloyd Reid, 65 De Forest Ave., Summit, N.J. Phone: CR 3-2230.

'22 MODEL T, round-back cpe. Licensed & in running cond. Dennis Leo, Alden, N.Y.

'40 PACKARD Super 8 conv. 4-dr. sed. New top & tires, engine recently o'hauled. A rare classic. \$500. Don Schumaker, Call Rd., Perry, Ohio.

'48 JAGUAR Mark IV 4-dr. sed. Good cond. Wire wheels, beautiful headlights. \$1100 or best offer. R. A. Newcomb, 3217 French St., Erie, Pa.

'51 ROVER 75 saloon. Dark green finish, light green leather, ww's. 32,000 mi., exc. cond. thruout. Factory shop manual, tools, inc. \$1050. J. Meyers, 18 Albright Circle, Madison, N.J. Phone: FRontier 7-5399.

FORD T PARTS. Wide range—mechanical, misc., some body parts. Many hard-to-get parts. Send for free mimeographed listing. Lower prices. E. Hemmings, 1036 Hampshire, Quincy, Ill.

'25 MODEL T rdstr. Orig. & complete, partly restored. New top, uph., paint, inside door panels. Has speedometer, mirror, moto-meter, 1 sidemount. Runs good. \$450. C. Rizzotto, 1426 62nd St., Kenosha, Wis.

'11 STANLEY STEAMER Model 62 "Gentlemen's Speedy Roadster." Absolutely orig. thruout, but thoroughly o'hauled. Like new in every way; famous "coffin-nose" non-condenser. \$5000 value. \$3750. Alton Walker, Box 65, Pebble Beach, Calif. Phone 7-6658.

'28 MARMON 78 sed. 20,000 mi., orig. cond., superb. Also, copies '28 Marmon line circular. 8 bodies shown, \$1 pp. L. Peterson, R-3, Lafayette, Ind.

'26 CHEVROLET 4-cyl. touring. Very solid & restorable. Needs paint, top, & uph. Everything orig., inc. manual & title. Stored in Burlingame, Calif. Highest offer. Bill Reinhardt, P. O. Box 394, Honolulu 9, T.H.

'28 ROLLS-ROYCE limousine. Left-hand drive. Engine down for re-ringing; have nec. parts & manual. Perf. cyl. head, good tires. Might deliver. \$650. Parker R. Snyder, c/o Daily Standard, Celina, Ohio.

DUESENBERG J parts—2 tubular steel connecting rods for white inserts, no longer needed for replacement. Scintilla Vertex magneto set up by Joe Hunt; other parts. J. L. Snydam, 814 Dunore Rd., Cincinnati 20, Ohio.

'52 MERCEDES-BENZ 300 sed. Gleaning jet black, spotless cond. New valves, brakes. Leaving for Eu-



rope, selling reluctantly for \$2450. Vic Hyde, 1737 Ferry, Niles, Mich. Phone: 3384W.

'47 LINCOLN CONTINENTAL cpe. 13,000 mi. on new engine, trans., o'drive. Black lacquer, green

leather & Bedford cord interior. Consider offers near \$1300. Samuel J. Brown, 300 Dorothy St., Moultrie, Ga.

'48 JAGUAR Mark IV sed. Black, with red leather. Sun roof, right-hand drive, wire wheels. Exc. cond., completely rebuilt. Best offer over \$1050. Vernon W. Johnson, 49 Barney St., Wilkes-Barre, Pa. Phone: Valley 2-8215.

'39 PACKARD V-12 Brunn touring cabriolet (1 of 8 built). Near mint. \$1775 firm (less than my investment). Irwin Coffey, Hwy. 101, Greenfield, Calif.

'36 AUBURN Supercharged 8 conv. sed., in running cond. Partially restored, new top, paint job. Tires good, engine fair, never been wrecked. \$600. J. R. Staloch, 126 Oriskany St. W., Utica, N.Y.

'37 HORCH conv. clb. cpe. Under restoration 2 yrs.; \$3000 spent toward mechanical perfection. Needs top, paint, dash (have instruments), some rechroming. Stored in Baltimore, Md. Capt. W. H. Smartt, S.A.M., Box 181, Randolph AFB, Tex.

'52 MERCEDES 300 sed. Black; former Embassy car. 45,000 mi.; mechanically good; paint, appearance perfect. \$2500 or best offer. H. W. Etre, 1742 R St. NW, Washington, D. C.

'40 CADILLAC 60-S sed. Black; perfectly orig., wet underneath twice—washed both times. 26,000 mi., consistent Concours winner. Your most critical inspection invited. Best realistic offer. Leonard M. Peterson, 311 S. Winnebago St., Rockford, Ill. Phone: 3-8437.

TURBO JET ENGINE. 450 hp. adopt any trans., will fit in any car. Weight 210 lbs. Reasonably priced. Pix, details, 50c. F. Spotts, P. O. Box 191, Gering, Neb.

'39 BUGATTI 57 4-place Gangloff conv. Hydraulic brakes, engine & body perfect. Just o'hauled in Paris. Leather interior. Can be driven anywhere. \$3250. V. Corradini, 1231 Oaklawn Rd., Arcadia, Calif. Phone: ELgin 5-6220.

'50 MERCURY 2-dr. sed. with '53 Chrysler ¾ house engine. Stick-shift with o.d., improved suspension & brakes. \$1500. Paul Sorber, MT, 5959 Hollywood Blvd., Los Angeles 28.

'35 MERCEDES CBR-200 conv. White, with black top. Modified '50 Dodge engine, but have orig. (in running condition when removed). \$500 or best offer. William Thomas, 1413 McAllister Ave., Sacramento, Calif.

'32 CADILLAC conv. sed. New: paint, custom top, 2-tone leather uph., carpets. Dual carburetors, ww's. Have \$1275 invested. \$950. Harold Scott, 62 Miller St., New Haven, Conn.

ORIGINAL MAGAZINE ADS on: Duesenberg, Auburn, Cord, Marmon V-16, Stutz, Pierce-Arrow, DuPont, Cadillac V-16, Isotta-Fraschini, Rolls-Royce, & hundreds of other autos. Complete list 25c. Sheldon J. Lewis, 1373 E. 12th St., Brooklyn 30, N.Y.

SENSATIONAL

ORDER TODAY!

Life & Gard

AUTOMOBILE SAFETY BELT

nationally advertised at

\$10.00

Save \$ \$

OUR PRICE

ONLY

4.95

TWISTLOC MODEL

The Life-Gard Twistloc Belt is a positive metal to metal lock. It cannot slip, or be accidentally released. It does not wear or fray the webbing. It is easily and quickly released. The metal to metal lock is preferred by auto makers.

PERFORMOMETER

Thousands sold by manufacturer at \$27.95! This fabulous "dash-board dynamometer" completely checks ACTUAL ROAD HORSE-POWER, WHEEL ALIGNMENT, BRAKE CONDITION, and 101 other important tests! Original cartons, everything included. No holes to drill... fits all cars!

nationally advertised at \$27.95

2 our price only \$9.95

Automotive Test and Tune-Up Kit

<p>consisting of</p> <p>JETMATIC COMPRESSION TESTER (Standard Model)</p> <p>TEST & PNEUMATIC ENGINE TESTER (Standard Model)</p> <p>VACUUM GAUGE/FUEL PUMP TESTER</p>	<p>Gale Hall Price</p> <p>\$7.50 \$8.75 \$11.70</p> <p>\$27.95</p>	<p>OUR SPECIAL PRICE</p> <p>\$2.99 \$3.18 \$4.10</p> <p>\$7.95</p>
--	--	--

3 NOW REDUCED TO ONLY \$7.95

FREE TRIAL OFFERS!

AT BARGAIN PRICES!

Gale Hall Engineering MILE-O-METER

Install this famous instrument on your dash — know how many miles-per-gallon you're getting as you drive — know the condition of your engine — avoid breakdowns — save gallons of gas in every tankful! No holes to drill — fits all cars!

4 STANDARD sold everywhere at \$9.95..... only **\$4.98**

5 DELUXE sold everywhere at \$14.95..... only **\$7.95**

FREE! \$1.50 Gale Hall CHAMMY-SKIM free with every purchase! Amazing simulated chamols — sparkles your car to perfection.

NOTE: ALL PRICES PLUS 45c POSTAGE AND HANDLING FOR EACH ITEM

WOW! These prices are terrific! Send me the instruments whose numbers I've circled below — I've checked the purchase plan I prefer.

☐ 1 I WANT TO SAVE EVEN MORE AND GET THE FREE CHAMMY, TOO! Enclosed is my check or money order for \$.....

☐ 2 I understand, too, that I can get an immediate refund by returning any or all of the items within 7 days of date of receipt.

☐ 3 Send C.O.D. Same \$1.50 FREE CHAMMY-SKIM and money-back guarantee!

☐ 4 Send on "free trial" basis. No money enclosed. (add postage and handling.)

1

2

3

4

5

☐ FREE CHAMMY, TOO! Enclosed is my check or money order for \$.....

☐ I understand, too, that I can get an immediate refund by returning any or all of the items within 7 days of date of receipt.

☐ Send C.O.D. Same \$1.50 FREE CHAMMY-SKIM and money-back guarantee!

☐ Send on "free trial" basis. No money enclosed. (add postage and handling.)

Name.....

Address.....

City..... State.....

NEW ENGLAND SURPLUS SALES CO.

Dept. **MT-3** Newburyport, Mass.

MOTOR TREND/APRIL 1956 71

TAP* "Glassing" Manual

Non-technical, how-to-do-it, home workshop manual on repairing, restyling and building auto bodies, boat hulls, furniture, art objects, etc., with **Fiberglass and Resin**.

Learn how to save money... make money with plastic laminates. Only \$1.00, refunded immediately if you are not fully satisfied. We pay the postage if you tear out this ad and send it along with your buck.

***Taylor & Art, Inc., Plastics**
everything in plastics for auto bodies and boats

1710 EAST 12TH STREET
OAKLAND 6, CALIFORNIA

AMAZING PERFORMANCE

VERTEX MAGNETOS

15% more power
Faster Acceleration
Proved High-Speed
Performance

Send 25c for complete 20 page, illustrated Vertex Handbook, includes performance curves.

RONCO CORP.

Blue Bell 1, Pa.
(Philadelphia Suburb)

Phone Conshohocken 6-4124



NEW USED O.H.V. MOTORS ADAPTORS

Send for Free List When Ready to Deal
We Buy—Sell—Trade—Custom Installations

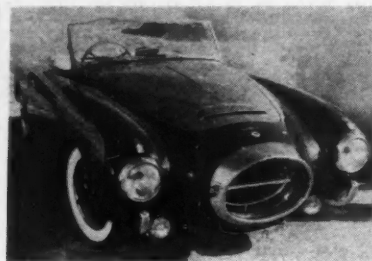
SHELL MOTORS—Box 25455, L. A. Cal.

TORQUE Specifications

Engine Torque Recommendations (automobile, truck, tractor, Diesel and marine) tabulated for 70 different manufacturers' products plus handy chart with suggested torque values for all screws from No. 4 to and including large 2 inch bolts—also many torque tips.

Send 25 cents to

TORQUE WRENCH
333 W. First St. • Elmhurst, Ill.



LANCIA AURELIA. Body by Farina. Winner International Grand Prix, Geneva 1953. Immac. Concours cond.; all-weather equip't. Orig. cost \$10,000. Priced to sell. V. Corradini, 1231 Oaklawn Rd., Arcadia, Calif. Phone: ELsin 5-6320.

CLASSIC CAR Sales Catalogs: Packard, Chrysler, Lincoln, Cadillac, Pierce Arrow, orphan & foreign cars; minimum \$5 each Also MoToR (N.Y.) Annual numbers; details for large, stamped addressed envelope. A. E. Twohy, 400 N. Kenmore, Los Angeles.

'54 CADILLAC—Brokaw Custom conv. Total investment \$10,500. Diamond-studded dash knobs, interior & exterior exquisitely redesigned. Pix, details, 25c. Best offer over \$8000. John A. Stryker, 4604 E. Lancaster, Ft. Worth, Tex.

'31 AUBURN 898-A conv. phaeton. Fine classic, rebuilt Lycoming engine, spare heads, manifolds, carbs, radiator, transmission, headlights, etc. \$595 or best offer. Pix 25c W. L. Mrar, 17 Dogwood Rd., Morris Plains, N.J.

3 NEW UPHOLSTERY channel sections. Enough for sport car seat. Each channel over foot long, 1 3/4" wide. Sell at fraction of orig. cost. Write for details. George Costantakos, 742 Adams Ave., Scranton, Pa.

SELL OR SWAP

'55 HUDSON ITALIA. Beautiful white finish; perf. cond. Used as demonstrator. \$3700. Will consider trade. C. A. Smith, 41 Beechwood Rd., Ft. Mitchell, Ky. Phone: ED 1-1915 or AX 1-1200.

'36 CORD Westchester. 1500 mi. since partial engine overhaul. All orig. equip't. \$800 f.o.b. Albuquerque, or trade for Corvette & pay difference. F. B. Brumley, 8926 Fairbanks NE, Albuquerque, N.M. Phone: 9-1809.

'15 FRANKLIN rdstr. Low mileage, exc. cond. New tires, new 2-tone lacquer—Brewster green & black. \$1250 or trade on Stanley Steamer. Herb Anderson, 4703 Franklin St., Omaha, Neb.

'38 CADILLAC V8 7-pass. sed. Big, long & black. Solid, top mech. cond., clean inside & out. \$225 or swap for pre-war car. H. P. Read, 1434 N. Sedgewick, Chicago 10.

'20 ROLLS-ROYCE Silver Ghost 5-pass. tourer. English, rear windshield, trunk. New paint, exc. tires, re-nickelled. \$4450 or trade for Rolls or Bentley '30s and cash. Charles S. Hoyt, Springdale Ave., Dover, Mass.

'33 AUBURN V-12 phaeton. 2nd owner, exc. cond., 44,000 mi. Orig. ohv engine, knockoff hubs, dual carbs, exhausts & differential. \$1050 or will consider trade. A. W. Brownlie, Box 26, Providence Rd., Townsend 4, Md.

'40 LINCOLN CONTINENTAL conv. Full-race Cad 250-hp engine. Sharp cond. thruout. \$1400 or swap for late-model economy car. A. G. Subt, 9747 E. Maplewood, Bellflower, Calif.

CLASSIC Duesenberg, Rolls, Cadillac, Lincoln, Packard, Mercedes, Stutz, Pierce, etc. Snapshots, literature, 8 x 10 photos, & orig. ads for sale or trade. Mammoth listings 10c. Ted Templin, 1804 N. Fairview St., Burbank, Calif.

WANTED

'25-'35 PIERCE-ARROW conv. Must be complete & in good running cond. Send photo, price, other info in 1st letter. Reward for leads. Bernice Abramson, 419 Emerald St., Harrisburg, Pa.

\$5 REWARD for locating new or used '47 Hudson ring & pinion set. Ratio 4 1/4 to 1. Your Hudson dealer may have 1 in stock. John Pridnia, 1252 Bevedere, Detroit 14.

WILL PAY CASH for automobile sales catalogs, 1900-1942, all makes. Also will buy radiator emblems. Send your list and price. Lewis A. Mayer, Munich, Mich.

OVERHEAD VALVE conversion for Cord 812, new or in good used cond., or information regarding same. F. Replegle, 670 Lexington Ave., New York. G.I. ABOUT TO BE DISCHARGED, want classic. Prefer Packard, but have open mind. Send details & pix. Sgt. Robert G. McClellan ER16458083, 524th M.P. Co., APO 958, San Francisco, Calif.

HARD TOP for '52 Jaguar rdstr. Or will trade car for good Jag cpe. 11,000 mi. on rdstr. W. E. Weed, 3550 E. University Ave., Des Moines 17, Iowa.

1 PAIR of new '31 Model A running boards. Also good windshield frame and wooden top bows for '31 Ford rdstr. Will pay top price. Russell J. Gerrits, 5719 N. Milwaukee Ave., Chicago. Phone: RO 3-1698.

Holts HAVE THE ANSWER!

Applies like putty— sets metal hard

Fills dents, holes, cracks etc.—makes like new. Can be filed or sanded to smooth finish. Water, oil and gasoline proof. Takes enamel or lacquer.



Loy Cold Metal—
8 oz. can \$1.29

LOY COLD METAL

LOY in tubes Handy cold metal for all repairs. Cheap—easy—no heat. Tube \$1.00

LOY SOLVENT Thins Loy Cold Metal for brushing or spraying. 2 oz. jar \$9

LOY TWIN PACK 8 oz. Can Metal and 2 oz. Jar Solvent. \$1.79

New low heat metal filler— melts into place—sets instantly!

Fills holes and dents. Needs only low heat from special electric paddle, soldering iron etc.

INSTANT LOY

Stick 40—Dozen \$6.95

At Auto Accessory and Hardware Stores

TREGLOWN CO. INC., FANWOOD

CANADA: 1000 GREENE AVE. MONTREAL 8

McBar Adaptor Housings

MODEL ENGINE TO TRANSMISSION

- CF-52—Cad and Olds to '52-54 Ford & Merc
- CF-50—Cad and Olds to '49-51 Ford & Merc
- CF-40—Cad and Olds to '32-48 Ford & Merc, Lincoln, Ford pick-up and 1 1/2 ton truck
- 52-LF-52—Lincoln OHV to '52-54 Ford & Merc
- 52-LF-50—Lincoln OHV to '49-51 Ford & Merc
- 52-LF-40—Lincoln OHV to '32-48 Ford & Merc
- LF-40—'49-51 Lin. FH to '32-48 Ford-Merc-Linc. etc.
- CRF-52—'51-53 Chrysler V8 to '52-53 Ford & Merc
- CRF-50—'51-53 Chrysler V8 to '49-51 Ford & Merc
- CRF-40—'51-53 Chrysler to '32-48 Ford & Merc
- CSM—Cad & Olds to '53-54 Stude manual transmission
- CSA—Cad & Olds to Stude automatic transmission

FREE CATALOG—CUSTOM INSTALLATION

Inquiry invited. Proper clutch recommendations

McBar Machine Shop, Inc.

65 N. Miami St., Peru, Ind., Phone 5155 or 6200

RAMCOTE FLEXIBLE FINISHES

Restores - Colors - Protects Leather, Leatherette and Vinyl Plastic

Is your leather or plastic upholstery faded or worn? RamCote restores the original color and texture to your car's upholstery.

You can change color, too! Available in eleven standard colors and clear. Any shade obtainable by inter-mixing colors. Easily applied, brush or spray. Won't chip or peel. Waterproof—fadeproof. Use on Luggage, Sports Equipment, Lounge Chairs, etc. See your local dealer or write for FREE information and color chart.

RAMCOTE PRODUCTS, Dept. M-46
1141 W. 69th St. Chicago 21, Illinois



Valves Sticking?

Get **PYROIL**
CLEANS... LUBRICATES
RESTORES LOST POWER

Now... Free 'em

Pyroil "A" added to your gas clings to valves and stems so carbon can't keep valves open. Eliminates overheating. Increases power. Saves gas and repairs. Get Pyroil "A" today. Save more... buy in pints, quarts, gallons.

Write for trial offer. Dept. MT-46
PYROIL COMPANY
La Crosse, Wis., U.S.A.
Toronto, Canada

SUPER LUBRICANTS • WORLD FAMOUS SINCE 1929

Memo

PLEASE IMPORT THIS ONE...

BEETLE-LIKE LINES of the Saab 93 are likely to cause shudders among U.S. body stylists, but beneath those chromeless panels lurk a remarkable number of engineering innovations. It's built by the Saab Aircraft Co., of Linköping, Sweden. The refinements in the Saab 93 are probably due to Saab's long aviation experience. One might think, from a cursory glance at mechanical specifications, that this 37.5-bhp (at 5000 rpm) machine was of the sewing variety. How sly of Saab! That's a 3-cylinder, 2-stroke engine 'neath the hood, coupled to an ingenious 3-speed gearbox; all of the gears are helical, including reverse, thus eliminating the whining sound upsetting to many a U.S. ear. A simple system of dog-clutches engages the gears and a hefty free-wheel is locked from the driver's position, allowing a shift from neutral to 1st instan-

considering the suspension and the performance of earlier Saabs in Scandinavian ice races, it should be delightful. The 90-square-inch total braking area works out to about 21.9 psi. Hydraulically actuated, with dual cylinders on the front wheels, the binders should stop you on a *krona*.

Independent suspension of all 4 wheels is accomplished simply and efficiently. The front end rides on coil springs with transverse links mounted in rubber, a stabilizer bar, and telescoping (aircraft type, naturally) shock absorbers. The rear axle is a pair of U-shaped members fastened in the center and controlled by longitudinal links, also with coil springs and tubular shocks. Nearly all joints are mounted in rubber, reducing lubrication requirements to a minimum. Further refinements include 4-wheel hydraulic brakes of advanced design, tubeless 5.00 x 15



taneously, and between the synchronized 3rd and 2nd without disengaging the 7-inch single dryplate clutch.

The engine itself is a gem, built for many years of reliable service. Consider this data: 3 cylinders, 4 main ballbearings, twin-row roller bearings on the connecting rods, slide valves, and a special torsional vibration damper. The oil is introduced thru the fuel induction system. Oil to gasoline ratio is specified as 1 to 25 and some rather involved antics could be involved in approximating this mixture. Fuel tank capacity is 9½ gallons. There is a gauge and a warning light which blinks just under 2 gallons. Gasoline is electrically pumped to a Solex downdraft carburetor. Electrical system is 12 volt and includes a 160-watt generator. An unusual placement of the radiator further confuses service station personnel because it is *behind* the engine, with its pump, thermostat, fan and 1.7 gallons of water.

Data on handling is not available, but

tires and 14 to 1 rack and pinion steering which should be nicely sensitive.

The 2-door sedan body is of unit construction with the frame, similar to that of American Motors, and contains a handy seat-shuffling arrangement. A bed outfit (available at extra cost) can be stored under the back seat and, when made up, will accommodate 2 or 3 persons quite comfortably. Also, the rear seat can be quickly removed, leaving a clear, relatively flat area from the trunk to the front seat. In fact, even the front passenger seat is removable so that the Saab can easily be used as an emergency ambulance, or to transport bulky items like ladders, tools, rugs, etc. Numerous accessories are standard with the Saab, including a clock, blinking-light turn indicators, a jack, complete set of tools, and a heater-defroster.

In Sweden, the Saab 93 costs about \$1450, or less than a dollar a pound, and it *may* be available in the U.S. after April 1. See why we said, "Please import this one..."?

Quad Exhaust For Chevrolet & Plymouth V-8

**make them
hotter than hot!**



chevrolet V-8

FENTON

CAST IRON EXHAUST HEADERS

YOU'LL get the extra "kick" of extra H.P. (up to 11% over "dual pipes") plus longer engine life, too, when you add FENTON Cast Iron Exhaust Headers. Exclusive "Quad Exhaust" gives two exhaust gas outlets to each bank of cylinders. Full free flow design—no sharp bends or corners.



There are FENTON CAST IRON EXHAUST HEADERS for most car makes and models. Write today for free illustrated booklet plus name of your nearest FENTON DEALER.

Dept. MT
STANDARD AUTOMOTIVE MFG. CO.
3401 East Pico Blvd.
Los Angeles 23, California

FREE NEW 1956 CATALOG ...Everything for TOP POWER! ECONOMY! STYLE!

Tells You...
How To Make Your Car A
Money-Saving POWERHOUSE!

New! Truck-tested, road proven power products to DOUBLE your car's Power, Pep, Pick-up, Efficiency, Economy, Safety, Styling! Over 100,000 in stock: Multi-Carburetion; Dual Exhausts; Superchargers; Racing Cams, Heads, Pistons, Engines; Customizing Accessories, Chrome Trim; etc. BIG SAVINGS! Plus "How-To" tips, power secrets. FREE! No Strings! Write to:



ALMQUIST ENGINEERING CO. DEPT. MT-41
MILFORD, PENNA. Dealers Wanted

WELD
BRAZE
CUT
SOLDER



4 WAY
ONLY
\$14.75
f.o.b. factory
WELDER

Complete with
Twin Carbon Arc
Torch and accessories
... to
handle all metal-
craft work.

Acclaimed by thousands of stock, hot rod and customizing enthusiasts as the welder of 1001 uses. Easily operated from properly wired 110 volt AC or DC line. The ideal gift with a life-long use. . . . Order today on 10-day money back guarantee.

Literature on larger equipment on request

FOUR-WAY WELDER COMPANY

1810 South Federal St., Chicago 16, Ill., Dept. F27-D

MOTOR TREND/APRIL 1956 73

How! Turn Your Waste Gas Into SUPER POWER!

IT'S TRUE! Now you can get the breath-taking acceleration... jack-rabbit starts... blazing new power that you've dreamed about for years—simply by harnessing the raw, unburnt gasoline that your engine is wasting today!

You can get performance from your present car that will make your friends gasp with astonishment—and you can save \$25, \$50, even \$75 a year on gas bills alone doing it!

Yes! You, yourself can fit this amazing GASOLINE ATOMIZER on to your car in as little as 20 easy minutes! And it is guaranteed to pay you back your full purchase price, in gas savings alone, in the first 3 to 4 short months that you use it. Here's why!

By RICHARD JOHNS

Mr. Car Owner! How would you like to have the driving thrill of your life next weekend?

Picture this yourself! Next weekend you go down to your car—the same tired car that you've been driving for years. You've made only one simple change to that car, so easy that your 16-year-old son could do it! But now, when you turn on the ignition, a modern miracle of engineering science comes to life under your hood!

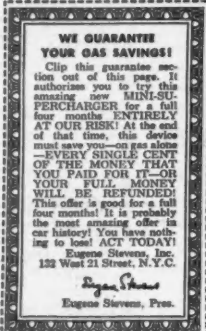
From the very first moment, you'll see and feel the difference in that engine. That engine will hum with new, throbbing power. When you release the emergency brake, your car will glide out of its parking space... roll down the street with your foot hardly touching the pedal. Every 30 or 40 seconds, you'll give that car an extra shot of gas... feeling it spurt ahead... testing the new power that's singing underneath your foot!

We ask you to pull up to another car at the stop light, of approximately the same year and make as your own! Wait until the light changes from red to green. Let the other car start first. Watch the other car get half way across the street. And then slam your foot down on the gas pedal!

Before that other car has even crossed the street, you will have caught up with it. In a brief second, you and that other car will race fender to fender. And then you will flash away from him... you will leave him a full block behind... you will look in your rear view mirror and see the startled look of amazement in the other driver's eyes!

TEST THIS NEW POWER A HUNDRED DIFFERENT WAYS!

But this is just the beginning! Test this equipment for one full month—entirely at our risk! Test



WE GUARANTEE YOUR GAS SAVINGS!
Clip this guarantee section of this page. It authorizes you to try this MINI-SUPERCHARGER for a full four months ENTIRELY AT OUR RISK! At the end of that time, this device must be returned to us—EVERY SINGLE CENT OF THE MONEY THAT YOU PAID FOR IT—OR YOUR FULL MONEY WILL BE REFUNDED!

This offer is good for a full four months! It is probably the most amazing offer in car history! You have nothing to lose! ACT TODAY!
Eugene Stevens, Inc.
114 East 32nd Street, N.Y.C.

on the highway! Use it to flash away from other cars... spurt up the steepest hills... actually pass other cars in 2, 4, 6 and even 8 seconds LESS than you could have done formerly!

Test this equipment in long range driving! See the enormous gas savings it gives you at high speeds! Prove to yourself that at 50... 60... even 70 miles an hour, your foot is still half-way up the pedal—you still have all the reserve power you need to get out of any emergency on the highway!

HOW DOES THIS PRODUCT GIVE YOU SUCH TREMENDOUS NEW POWER?

And you get all this performance—and more—from a small, polished machine of bronze and aluminum that you can hold in your hand! Here's why:

Gasoline in its liquid form is not explosive. If you accidentally



YES! This amazing "MINI-SUPERCHARGER" gives you as much as 20 more horse power from your engine! Gives you the gas economy you've dreamed about for years! Here's why. This Power Booster works on exactly the same principle as superchargers selling for as high as \$600. Its whirlwind propeller (A) breaks up the raw, unburnt gas that your engine is wasting today... gives you blazing new power from every drop! Its emergency breather valve (B) forces huge quantities of fresh air into your engine... forces that engine to breathe deeper... push harder... pile up more mileage from every gallon you buy! It gives you a TREMENDOUS NEW BURST OF MONEY-SAVING POWER, just when you need it most—when you flash away from traffic... shoot up steep hills... pick up speed on the open highway! No wonder dozens of leading car magazines call this the "money-saving discovery of the year." Test this amazing gas-saver yourself—without risking a penny! THE THRILLING FACTS ARE ON THIS PAGE!

drop a lighted match into a bucket full of gasoline, the chances are 10 to 1 that that gasoline will actually put out that match. But simply mix that same bucket full of gas with the proper amount of air, and you will have enough explosive power to drive a ten ton truck!

The main purpose of this machine is to SUPER-MIX... SUPER-VAPORIZE... SUPER-ATOMIZE your gas in exactly that way! To squeeze the hidden power out of that gas! To mix that gas with much greater volumes of air! To make that gas more explosive in the engine of your car!

No wonder men have paid up to \$600 for Superchargers! What we are offering you on this page is a MINI-SUPERCHARGER—easier to install—less expensive! But still the only power product you can buy with all these tremendous advantages:

1. You can install it yourself, in just 30 minutes, even if you never picked up a tool before in your life! No \$10, \$15 or \$20 mechanic's bills! No drilling, or grinding of any kind! You never

even touch the inside of your engine!

2. It never needs further adjustments, for the full lifetime of your car! Nothing to go out of order or break down on the highway.

3. It takes up no room in your car... makes no "soused-up" noise! No shifting around of engine parts. No "hot rod" noises to cause embarrassment!

SO EASY TO INSTALL THAT EVEN YOUR 16-YEAR-OLD SON CAN DO IT!



HERE'S ALL YOU DO!

Step 1. Open your hood. Locate Air Cleaner and Carburetor Unit that sits smack on top of your engine. Simply take an ordinary wrench and loosen the

two or three bolts that hold carburetor to the engine!

Step 2. Lift up the carburetor. Put MINI-SUPERCHARGER unit in place. What could be easier?

Step 3. Replace carburetor. Now turn on your engine! And then get in and take the most thrilling drive of your life!

TRY IT ENTIRELY AT OUR RISK

This MINI-SUPERCHARGER (U.S. Patent No. 2,408,937) sells for only \$11.95 for most cars and only \$14.95 if your car has a special four-barrel carburetor. This is your total cost—there is no installation fee! And, most important of all, we guarantee that you will save the full purchase in gas bills alone—in the first 3 to 4 months that you own this device.

You have nothing to lose! Try this equipment entirely at our risk. It must give you a whole new world of driving pleasure and economy or your full money back! Act today!

EUGENE STEVENS, INC.
114 EAST 32ND ST., S-2504
NEW YORK 16, N.Y.

Here's Proof!

SCIENTIFIC TESTS SHOW AMAZING NEW HORSEPOWER STARTLING GAS SAVINGS!

Installation of the item was exceptionally easy—less than 25 minutes. Immediate results show a definite increase of 11 horsepower on the Dynamometer—and the increase in mileage was easily up to 5 miles more per gallon.

Sincerely, VINCENT LOMBARDI
Service Manager of one of the country's largest auto organizations.

FOR BETTER MILEAGE FROM A FEW LAST MINUTES WORK.

"I must tell you about the wonderful results your supercharger has given my 1964 Ford V-8. On a recent trip to Canada I averaged an easy 22 miles a gallon both going and coming, and the new power I get is really thrilling!"
—Mrs. Jeanette Ellinghaus, Bronx, N.Y.

"I have a 1961 Chrysler Windsor. Before installing your Mini-Supercharger I got approximately 15 miles per gallon. Since installing this supercharger I get as much as 20 miles per gallon!"
—A. E. Masterson, Brooklyn, N.Y.

"I have a Buick Wildcat. Am well pleased with them. It made a difference on the Buick Roadmaster. I got 14 to 20 miles a gallon. Would not take fifty dollars for them."
—O. J. Bryant, Yellowstone Park, Wyo.

MAIL NO-RISK COUPON TODAY!

EUGENE STEVENS, INC. DEPT 114 EAST 32ND STREET S-2504 NEW YORK 16, N.Y.

IMPORTANT: For fast service, be sure coupon is completely filled in.

Yes, I want to try your amazing MINI-SUPERCHARGER entirely at your risk! I will pay postman only amount checked below plus low C.O.D. charges:

☐ \$11.95 (My car does not have a four-barrel carburetor).
☐ \$14.95 (My car is equipped with a special four-barrel carburetor).

I understand that it must do everything you say or my full money back! (Also send me your Extra Gift Premium, the Free Air Bleed Needle Set. I may keep the needles even if I return the MINI-SUPERCHARGER.)

MAKE OF CAR _____ YEAR _____ PLEASE PRINT

MODEL _____ 4 DOOR OR 2 DOOR _____

CYLINDERS _____ STRAIGHT & _____ V-8 _____

STANDARD TRANSMISSION _____ AUTOMATIC _____

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

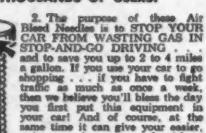
☐ CHECK HERE TO HAVE MORE! Enclose check or money order, and we pay all postage and handling charges! You save as much as \$1.00. Some money-back guarantee, of course!

FREE!

UP TO \$3 RETAIL VALUE! UP TO 2 TO 4 MILES MORE PER GALLON INSTANTLY, SAY THOUSANDS OF USERS.

THIS is probably the most widely sold piece of automotive equipment in the world! OVER HALF A MILLION DRIVERS have paid up to \$3 a set to put these amazing Air Bleed Needles on their cars! But we brought out this mini-factory at a sacrifice price! For this one advertisement only, we can offer you these exact same needles as a FREE gift, even if you return the MINI-SUPERCHARGER!

1. They fit onto the carburetor of your car, where they replace the standard Filling Adjustment Screw. If you have a six-cylinder car, then you will need only one of the Air Bleed Needles (regular retail price \$1.50). If you have an eight-cylinder car, then you will need two needles (regular retail price — \$3.00). In either case, you will discover the old needle and put in the new. THAT'S ALL. THERE IS NO IT! Even if you never touched your hood before, you can do it in 60 seconds... without touching a tool without even getting your hands dirty!

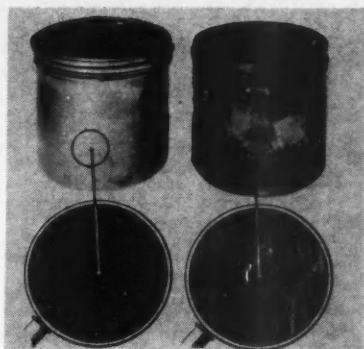


REMEMBER, THIS IS PROBABLY YOUR ONLY CHANCE TO GET THESE AMAZING AIR BLEED NEEDLES AS A FREE GIFT—a gift that is worth as much as \$3 to you—and gift that is yours to keep even if you return the MINI-SUPERCHARGER!

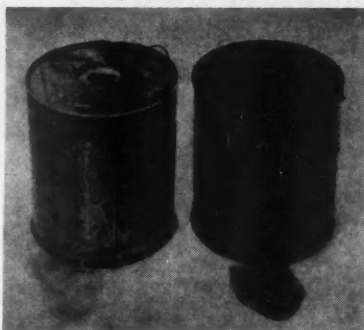
But you must act today! Our supply is limited! We can make this offer only this one time in this newspaper! Simply send in the make and year of your car, and this gift is yours! BUT ACT TODAY!

DEALERS! DISTRIBUTORS! CASH IN ON HUGE, FULL PAGE NEWSPAPER AND TELEVISION CAMPAIGN! WRITE FOR FREE DETAILS!

ADVERTISEMENT



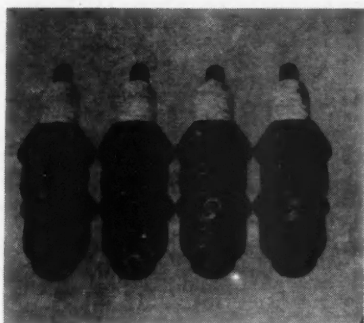
Enlarged section of piston (left) shows original grinding marks after 153,000 miles protected by a magnesium acid neutralizer. Unprotected piston on right shows sharp vertical scoring caused by acid wear after 65,000 miles.



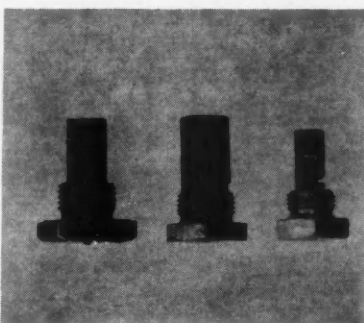
Filter and oil sample (left) from a car using an acid neutralizer show less sludge and fewer contaminants—both are still clean. Cartridge and oil from unprotected engine (right) show normal heavy deposits after the same distance.



Heavy carbon deposits are actually "baked" on the piston crown (right) unless the formation of resins is inhibited (left). Carbon deposits cause loss of power, clog rings, increase oil consumption.



A magnesium acid neutralizer destroys catalysts which help form electrically conductive deposits on spark plugs, finally lead to internal shoring. Plugs shown above were used in '54 Dodge V8 for 30,000 miles; still fire efficiently.



Acid action on magnesium alloy used for 3,000 to 10,000 miles is evident in this photo. Plug on left shows normal discoloration caused by salts formed during neutralizing action; pitted units (center and right) prove acids can destroy engine metals.



New acid neutralizer, made of a special magnesium alloy, uses a powerful Alnico magnet to "pull" iron and steel abrasives out of the oil. Simply place the unit near some iron filings and watch how they adhere to the magnet.

Amazing Chemical Alloy Cuts Acids Wear Helps Any Car—Old or New—or Your Money Back

Chemical device uses double protection action to combat (1) metal-eating corrosive acids and (2) damaging magnetic abrasives!

LABORATORY and road tests have finally proven that the major cause of engine wear in today's powerful automobiles is corrosive acids formed during combustion. Yes, the regular—and high test—gasoline you are using in your car contains sulfur. This sulfur, along with other impurities, is burning away your muffler and tailpipe, eating away the chrome on your rear bumper and, **EVEN MORE IMPORTANT**, wearing away at pistons, cylinders, and other parts of your engine.

How do these impurities—they're actually acids—do their damage? Every 20 gallons of gasoline contains almost a half-cup of destructive sulfur. During the combustion process this sulfur joins with water in the oil system to form metal-eating sulfuric acid. These acids get to work on metallic parts and actually cause most of the wear formerly blamed on friction. The damage is extended as accompanying sludge and carbon deposits result in a wasteful loss of power.

With test results to show that an alkaline agent would neutralize the acids and inhibit sludge and carbon formation, the Johns

Manufacturing Co. has prepared a special magnesium alloy drain plug called Magna-Power. Tests conducted by the Canadian National Research Council (Canada's Bureau of Standards) and the Southern Analytical Laboratory in Jacksonville, Fla., have found that this magnesium alloy (1) effectively neutralizes corrosive engine acids, (2) greatly inhibits the formation of sludges, gums and resins and (3) destroys catalysts that cause oil breakdown products which foul spark plugs and cause pre-ignition and internal shorting. Further experiments showed that by attaching a powerful Alnico magnet to the plug many iron and steel filings in the drain pan could be removed.

HERE ARE THE BENEFITS

With reduced acid wear and sludge formation, you get increased power for quicker starting and faster pick-ups. Elimination of many harmful spark plug deposits mean smoother driving, longer spark plug life. Less sludge also means (according to the Canadian Research Council) that oil can be used well over 3,000 miles and filter life is often doubled.

Road tests also show that wear on pistons, rings, valves and other parts can be reduced **BY AS MUCH AS 80%**. This means a car may be driven well over

100,000 miles without an overhaul. Meanwhile the powerful magnet draws iron and steel filings out of the oil system.

TRY MAGNA-POWER AT OUR RISK

Fill out the coupon at the bottom of this page and mail it to us today. Your order is filled the day it is received and the Magna-Power is sent to you with a Permanent Money-Back Guarantee. If you are not satisfied with the way it works, send it back at any time (years from now, if you choose) for an immediate refund.

Magna-Power, \$2.95 postpaid, is available for American cars, trucks and tractors, as well as popular foreign autos. Canadian orders filled from Toronto stock . . . \$2.95 each, tax incl. Canadian checks, money orders or cash accepted. Indicate year and make of vehicle with all orders.

JOHNS MFG. CO., Dept. M-4
Middlesex, N. J.

My car is a.....(make).....(year).
Please send me, postpaid, a MAGNA-POWER acid neutralizer. I enclose \$2.95. I understand that it is sold with an unconditional guarantee of satisfaction or my money back!

Name.....
Street.....
City.....State.....



Now
 fit the family
 into your
 sports car picture



The five-passenger **GOLDEN HAWK**— **275 hp....zero to 60 mph. in 8.7 seconds!**

Most power-per-pound of any American car! 0 to 60 mph. in 8.7 seconds . . . 60 to 100 mph. in 17.7 seconds! Torque, 380 ft. lbs. at 2800 rpm.; engine, 352 cu. in., V8, OHV; bore 4", stroke 3.50"; brake area, 195.3 sq. in.—biggest, safest, braking-to-weight ratio of any car. 4-barrel carburetion. Ultramatic Drive and all power assists available. Engineered to out-handle and out-run sports cars costing thousands more.

Here come the new Studebaker Hawks—swift, sweet-handling sports cars that carry five passengers in comfort!

The Hawks bring you all the blazing acceleration and performance you've ever wanted, plus sleek European styling. They're safe and snug in any

weather with a spacious, colorful interior. And under the rear deck there's a trunk with ample stowage room for a cross-country trip!

And here's another surprise—these beauties aren't just rich man's toys—there are *four* different Hawks to

choose from, four power choices, four price ranges—including the lowest!

Yes, here's sports car fun you can have—fun you can share with family and friends. Your Studebaker Dealer will gladly arrange a demonstration drive. Ask him today!

Tune in "TV Reader's Digest" every week.

Studebaker *Hawks*

GOLDEN HAWK

SKY HAWK

POWER HAWK

FLIGHT HAWK

Studebaker Division, Studebaker-Packard Corporation—Where pride of workmanship still comes first!

